

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

Meeting of the Working Group of Experts on 20-21 October 2016  
Discussion Paper #7

# KEY ISSUES FOR MEASURING SUSTAINABLE TOURISM

October 2016

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### 1. Introduction

A number of discussion papers have been prepared for the purposes of appropriately defining the measurement scope and possible pathways for establishing a statistical framework for the measurement of sustainable tourism. Generally, these papers have aimed to provide the content required to set the direction and intent rather than discuss as aspects of detail. At this stage of the project this direction setting and bringing together a range of perspectives is by far the most important requirement.

At the same time, through discussions with experts and in the course of preparing the discussion papers, a range of technical issues have been identified. These issues will need to be confronted and resolved pending agreement on the proposed direction for the work. The purpose of this paper is to provide an initial list of technical issues for subsequent resolution through appropriate channels. It is not expected that these issues will be resolved at the Working Group of Experts meeting in October 2016. However, it is important to determine (a) whether the issues included in this note are relevant and if so, sufficiently well described; and (b) whether there are any other technical issues that experts can identify that should be the subject of further consideration as the MST project proceeds.

In general the issues included in this note are statistical in nature. It will also be important for non-statistical perspectives to also be drawn into the discussion and if there are particular challenges in policy and analysis that should be incorporated it would be very useful for these to be noted. The more complete the understanding of the use and application of statistics, the greater the chance that the statistical framework can be designed and focused most appropriately.

It is likely that for a number of issues various solutions and approaches have already been developed within certain disciplines and initiatives related to sustainable tourism. However, since the MST project represents a joining of experts from a number of disciplines, it is important that any existing solutions are shared. This document should thus serve as a platform for issues and solutions to be brought forward and exchanged.

## 2. Description of measurement challenges and issues

### Methodological challenges

- i. The **integration of the demand side/consumption** – “visitor” - perspective inherent in tourism **with the supply side/production** perspective inherent in much environmental statistics. This issue has both a conceptual and a methodological dimension.
  - From a conceptual perspective, the definition of concepts such as “carrying capacity” and “sustainability” may be most easily understood from a supply side perspective – i.e. the potential for services and benefits to continue to be provided based on an understanding of the current available stock. Clearly there is a demand element to the supply-use equation, but teasing out precisely how this should be explained in the context of sustainable tourism and what this implies for measurement and interpretation will be important. It is quite possible that this issue has been well debated and resolved within sustainable tourism circles and perhaps it is largely a matter for making the connection to statistics.
  - From a methodological perspective, measurement of environmental flows in particular will likely commence from understanding flows such as water use, energy use, GHG emissions and solid waste from tourism businesses. The question that arises is how much of these flows is attributable to visitor activity. There are likely a number of options to be evaluated.
- ii. The **attribution of environmental flows in the context of international visitors**. The standard SEEA/SNA approach to attribution involves assigning natural inputs and residual flows to the economic units that use or generate the flows. In the case of tourism this will generally mean that flows are attributed to economic units supplying tourism characteristic products. However, it may be of significant analytical interest to understand the contribution of the consumption of non-residents, including for example, the attribution of GHG emissions due to air travel to the residence of the traveller.
- iii. More generally concerning international visitor travel but also relevant in the context of sub-national measurement of tourism activity is the **treatment of transport activity** where the activity crosses the spatial measurement boundaries. Methods to allocate activity to countries and destinations will need to be determined.
- iv. A particular issue in tourism statistics, particularly at local level, is the **seasonal nature of tourism activity**. It will be important to consider options for recording information on a sub-annual basis to support analysis of seasonal trends and to consider how seasonal trends might be linked to environmental patterns – for example linkages between rainfall and water use.
- v. Generally, frameworks for economic statistics are based on a focus on production, consumption and investment behaviour of *individual* economic units, i.e. businesses, households and governments. However, when integrating environmental perspectives it is important to be able to allow for **public/societal costs and benefits**, many of which are not-priced explicitly in markets. The extent to which measurement of these public costs and benefits can be taken into account could be an important aspect of the framework.
- vi. Although the current focus of discussion is on integrating environmental data with tourism activity, it is important not to forget about the need to **integrate social and cultural dimensions of sustainable tourism** into the statistical framework. Approaches to undertaking this integration need to be developed.
- vii. Standard components of sustainable tourism indicator sets include information on **visitor perceptions** of destinations and **local community attitudes** to tourism. These types of data are not usually collected through official statistical frameworks but their relevance in assessing progress towards sustainable tourism is clear. Methods to integrate these data within the MST statistical framework will be needed.
- viii. One of the motivations for developing a statistical framework is the potential to derive **indicators of sustainable tourism** that are based on consistently defined and coherently measured underlying data. It will be relevant to consider what indicators could emerge from the statistical framework and how these should be defined. Indicator areas of interest include: SDG indicators, visitor environmental footprints, industry diversity/concentration ratios, energy/water use efficiency, and tourism leakages.

*Scale of measurement and systems boundaries*

- ix. Generally, statistical frameworks are developed and implemented to provide national level information. However, for understanding environmental impacts and dependencies and for understanding tourism behavior it is increasingly clear that **sub-national, destination and/or location level information** is required. Ideally, the statistical framework will provide coherence between national and sub-national perspectives. Of course, the data requirements are much increased as finer scale information is incorporated and some variables may not be amenable to measurement at finer scales. Thus describing the appropriate scales of measurement for the various parts of the statistical framework will be important, since it is likely that different data sources and measurement approaches are required for data at national compared to sub-national level. Intensifying a dialogue with users about their data expectations and the benefits/potential and requirements of data at various scales, including related data sources, will be beneficial.
- x. In defining the scales of measurement, a particular focus will be needed on incorporating the concept of **tourism destinations** with national and regional level areas. Given the intent to link environmental and economic data, this will mean that spatially defining tourism destinations will need to reconcile with areas that are meaningful from an ecological perspectives, such as water catchments and coastal zones.
- xi. The more general issue is agreeing on how the concept of a **system boundary for assessment of sustainable tourism** can be best defined and consistently applied for measurement purposes. It is likely the case that the boundaries that are used for economic, environmental and social systems are differently articulated and defined. The ability to support consistency in measurement for the purposes of collecting and presenting information but also flexibility to support alternative views will be a challenging area of discussion.

*Statistical infrastructure and data collection*

- xii. The development of tourism statistics covering the multiple dimensions of sustainable tourism and at sub-national levels will likely depend heavily on the availability of a sound **business register** to support the collection of a wide variety of information from tourism businesses. Understanding the quality of business registers and the potential for it to form a key piece of statistical infrastructure is an important area for discussion. Of special interest will be the potential for businesses to be geocoded and hence support the robust measurement of data at fine, sub-national scales.
- xiii. It is anticipated that much measurement of sustainable tourism will be able to be undertaken through the integration or adaptation of existing data. However, given the range of potential areas of investigation it will be necessary to give a clear sense of how **priority areas for statistics** can be identified, and hence provide an understanding of the extent to which new or adapted **data collections** are needed.
- xiv. An important part of the data integration challenge raised through measuring sustainable tourism will be the use and development of classifications that can be consistently applied in different datasets. The use of **standard classifications** is a key driving force behind the development of coherent data and the derivation of indicators. Relevant areas for which the use of standard classifications is needed include:
  - Geography
  - Industry
  - Product
  - Environmental assets and flows
  - Visitors
  - Land cover and land use
- xv. From a data collection perspective, an interesting area for consideration is the potential role of **non-survey based data**, for example from administrative sources, mobile phones or satellite data. The potential to utilize this information should be considered in the development of the statistical framework particularly in the context of compiling sub-national and destination level estimates.

- xvi. The MST project is being taken forward by the international community of official statisticians as promoters of consistent and coherent measurement through national statistical systems. In this context, there is an important role for national statistical offices (NSO) in developing and implementing the framework. At the same time, in the area of sustainable development measurement, the role of NSOs has historically been unclear, especially with regard to regional and environmental statistics. In the area of tourism statistics, which may cut across the competencies of several different national entities, international compilation guidance has recognized the importance of inter-institutional collaboration and arrangements (in any case involving the National Tourism Administration and the Central Bank in addition to the NSO)<sup>1</sup>. It is therefore likely that progress will rely on collaborative efforts of multiple government agencies and other stakeholders. It will be important the MST project is able to discuss these issues and provide input on the potential **roles and responsibilities of different agencies**.

### **3. Conclusion**

The purpose of this note is to commence the process of listing the various conceptual and measurement challenges that need to be considered in the development of the statistical framework for sustainable tourism. It is not expected that the list of issues described above is a definitive list and experts are encouraged to clarify issues as required and add new topics to the list.

It is intended that the list will form the basis of the research agenda identifying those issues that require more extended investigation and discussion through the process of preparing the statistical framework.

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<sup>1</sup> International Recommendations for Tourism Statistics 2008 Compilation Guide (IRTS 2008 Compilation Guide): <http://unstats.un.org/unsd/tradeserv/tourism/manual.html>