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The importance of sustainability and the importance of measuring it is beyond discussion; the discussion usually follows on the method.

The Statistical Framework for Measuring Sustainable Tourism (SF-MST) presented in the document is a good picture of what a perfect statistical system to measure sustainability (within the tourism context) should be. Thus, it looks like a distant goal. It is predictable that even countries with somehow developed Tourism Satellite Account (TSA) and System of Environmental-Economic Accounting (SEEA) will find the SF-MST a comprehensive but also very ambitious and demanding framework.

# 2. The rationale and context of the Statistical Framework for Measuring Sustainable Tourism (Chapter 1);

Realizing that sustainability isn't a "one dimension issue" makes the SF-MST the natural answer to measure it, since it appears as being "*an organizing structure for integrating statistics* on the economic, environmental and social dimensions of sustainable tourism".

It also, as the document mentions, "responds directly to the **increasing demands for information** that takes in account the various aspects of sustainable development and is relevant at different scales of analysis **from local to global levels**. These demands are most highlighted in the need for measures of progress towards the internationally agreed Sustainable Development Goals (SDGs) **as part of the 2030 Development Agenda**."

### 3. The structure and the coverage of issues;

(The comments overcome those on the coverage of topics on point 4)

#### 4. "The rationale of adopting an accounting and system based approach"

The reference to an accounting system is a very useful approach since it is the easiest way of "merging" the several accounting systems or frameworks in which is based: the tourism satellite account, the environmental accounts (and other possible to assess the social dimension).

Those frameworks have in common the National Accounts (NA) references (concepts, accounting rules and classifications), that are a good anchor for a new framework; many issues are answered within the system of accounts and do not need to be addressed within this specific framework.

# 5. The coverage of topics in Chapters 2 (economic), 3 (environmental) and 4 (social) and whether you have suggestions for additional areas of research and relevant literature;

As already mentioned, SF-MST is a very comprehensive framework, it has a great coverage. However, for the same reason it is also very ambitious and demanding. All the transactions that already exist within the existing frameworks (TSA, SEEA) are reasonable to ask for in a short term, but those are few cases; those that fall out of the central core tables and ask for "extra-projects" efforts need to be carefully addressed and assess the amount of resources that they would take.

Only a case-by-case analysis to a specific indicator/set of indicators will allow assessing the possibility of compiling it. Although knowing that the project is not mandatory, it would be useful to know which are the most relevant indicators or information (as those references to the red cells within the tables). Alternatively, should we simply use the SDGs as a reference to determine the most important ones?

In Portugal, for instance, there is no Water flow account or Solid waste account. Therefore, tables 5.1 or 5.4 (page 42 and 46) will not be possible to compile at all, presently. The GHG emissions account and the Energy flow account are compiled. Therefore Tables 5.3 Tourism industries GHG emissions account (page 45) or table 5.2 Tourism industries energy flow account (page 44) are more viable, even though the definition of the industries would need some adjustments.

Another field of "completely new work", both in terms of tourism or environment, would be the analysis on the establishment level as pointed out in "2.3.6 Extending the TSA to record environmental transactions and eco-tourism operations" as a possible extension of the TSA.

Also in the case of Gross Fixed Capital Formation (GFCF), mentioned under "2.3.3 Accounting for tourism infrastructure and investment" as a way of measuring sustainability in a simple way, just using the TSA, we must remind that TSA table 8 on GFCF is not a core table. It is not considered a central table to assess tourism impact on the economy; it is itself considered as a TSA extension since it does not comply with the "final demand expenditure" that defines tourism expenditure.

The same comment could be made on Employment, which is seen in the SF-MTS as a potential "source" to explore or expand the social dimension. However, in order to have that social dimension, further breakdowns to what the TSA foresees are needed: gender, education level, etc., that would implicate to use a set of new data sources.

The reference to an environmental asset account, Water resources asset account (page 52), a Tourism land account (page 55), Accounting for tourism related ecosystem assets, is not possible in a near future and, possibly, not within the national statistical offices.

### 6. Whether discussion of measurement in spatial terms (Chapter 5) is heading in an adequate direction and any comments on this.

- When discussing sustainability, especially within a tourism context, the spatial dimension is an essential part of the analysis. Reaching a common terminology on the spatial scales is, therefore, a natural "first step", as the document proposes.
- Integrating data that crosses several spatial levels or breaking it down to a specific spatial area in a consistent and coherent way is a statistical challenge. In fact, ecosystems don't "respect" administrative boundaries and statistical systems do. Even when those terms are clearly defined, some questions may remain. For instance, is it wrong to compare some national statistic of a small country to a sub-national statistic of a big country (supposing that both spatial areas are equivalent in area)?
- Global, national, regional and sub-national (regional, municipal/city-region, local) are the terms proposed under **5.2 Terminology with respect to spatial areas**. (<u>Note</u>: there is the reference to "five scales", in paragraph 8, is not clear since it appears to be only 4.)
- Under "5.3 The statistical challenge in defining spatial areas" the term "**data set**" is used often, for instance: "... i. ensuring that for each data set the spatial boundaries are internally coherent"; it should be clearer to what "data set" refers to, does it refers to data sources, result tables, both? Examples would probably help.

- Under 5.6, the recommendation or the forwarded pathway in reconciling different spatial levels by "**the delineation of spatial areas at very fine levels**" should (also) alert to the trade-off between "level of detail" and "data quality" or "data representativeness". Also the delineation of "fine levels" of spatial areas must be justified by the relevance of the tourism phenomenon/project; statistics are not a final goal by themselves.
- Even if "the accounting principles [in the SNA] are independent of the scale", that doesn't mean that the data sources that allow to measure those NA aggregates are. Methodological aspects must be considered in order to have representativeness data whenever smaller/bigger area is to be statistically relevant. The usage of National Accounting principles is not a guarantee per se that the phenomenon or the aggregate is well measured.
- About *Possible characteristics and criteria for delineating sub-national spatial areas,* it seems that the presented criteria (tourism supply/visitor demand) are complementary and not independent or mutually exclusive, at least within macro statistics context, like the TSA. If there is a visitor demand there is a counterpart of tourism supply; the main goal of the TSA is to find the balance between them within a territory.