UNWTO Asia-Pacific Workshop on Measuring the Sustainability of Tourism
14 – 15 December 2021
Overview of Statistical Framework for Measuring the Sustainability of Tourism
Development of SF-MST follows a standard UN process

Multidisciplinary stakeholder engagement

Innovation in statistics, First statistical framework to integrate:

- 3 pillars of sustainability – environment, social, economic dimensions
- Global, national, regional & local scales

Advantages of statistical approach: trust, comparability, relevance, (spatial) coherence

Build on existing statistical standards
- SNA, TSA, SEEA, Labour
Placing SF-MST in Context

Measuring the Sustainability of Tourism
Linking data and decisions


What? Standard definitions, classifications & terms

How? Data & methods

MST and sustainable tourism policies

Statistical Framework for MST

Economic
- Tourism industry value added
- Tourism establishments
- Tourism employment
- Visitor numbers
- Visitor expenditure
- Investment & infrastructure

Environmental
- Water
- Energy
- Waste
- GHG emissions
- Land
- Ecosystems
- Biodiversity
- Protected areas / parks
- Natural resources

Social
- Community
- Health outcomes
- Education
- Income & wealth
- Decent work
- Governance
- Human rights
- Accessibility
- Culture / heritage
- Security

Spatial scales: Global, National, Regional, Local

MST in practice: statistics, accounts & indicators
Proposed structure and coverage

• Introduction (Chap 1)
  • What is sustainable tourism?
  • The nature and benefits of a statistical approach
  • Overview of the SF-MST
  • Principles of implementation and application (e.g. SDG indicators)
• Measuring the economic, environmental and social dimensions (Chap 2, 3 & 4)
• Defining spatial areas (Chap 5)
• Combined presentations, indicators and applications (Chap 6)
• Classifications, glossary, references
Nature of an accounting based approach

• SF-MST builds on existing measurement frameworks of TSA, SNA and the SEEA which are all accounting based

• Extends to cover the scope imagined in wealth accounting with multiple capital – produced, natural, human, social

• Uses accounting as a platform for organising data, especially distinguishing stocks and flows and hence consistently framing a discussion of sustainability, capacity & resilience

• SF-MST does not aim to define a “triple bottom line” or make assumptions on the nature of sustainability
Elements of the SF-MST

- Decision support tools, including indicators
  - Statistical Framework for MST
    - Combined presentations
    - Base accounts and tables
    - Standard definitions, classifications & measurement boundaries
  - Data sources
# Measuring Sustainable Tourism

**Linking data and decisions**

## Statistical Framework for MST – Core tables

<table>
<thead>
<tr>
<th>Economic</th>
<th>Environmental</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO1. Value added by tourism industries</td>
<td>ENV1. Water use by tourism industries</td>
<td>SOC1. Community capacity by tourism region</td>
</tr>
<tr>
<td>ECO2. Employment by tourism industries</td>
<td>ENV2. Energy use by tourism industries</td>
<td>SOC2. Income distribution by tourism region</td>
</tr>
<tr>
<td>ECO3. Tourism establishments by tourism industry by tourism region</td>
<td>ENV3. GHG emissions by tourism industries</td>
<td>SOC3. Decent work measures by tourism industry by tourism region</td>
</tr>
<tr>
<td>ECO4. Visitor numbers by tourism region</td>
<td>ENV4. Solid waste from tourism industries</td>
<td>SOC4. Cultural heritage by tourism region</td>
</tr>
<tr>
<td>ECO5. Visitor expenditure by product by tourism region</td>
<td>ENV5. Land cover type by tourism region</td>
<td>SOC5. Visitor perceptions by tourism region</td>
</tr>
<tr>
<td>Number of establishments</td>
<td>Tourism industries</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accommodation for visitors</td>
<td>Food &amp; beverage serving</td>
</tr>
<tr>
<td>Size of establishments (# jobs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ownership (# establishments)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-resident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal entity type (# establishments)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household (unincorporated)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## SF-MST Tables: GHG emissions

### Tourism industries GHG emissions (Mass units - '000 tonnes)

#### Supply table for GHG emissions

<table>
<thead>
<tr>
<th>Generation of emissions</th>
<th>Accumulation of Emissions from land fill</th>
<th>Flows from Environment</th>
<th>Total supply of emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism industries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodation for visitors Tourism</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food &amp; beverage serving Tourism</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passenger transport Tourism</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel agencies &amp; reservation services Tourism</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other tourism industries Tourism</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total tourism industries Tourism</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Type of substance

- Carbon dioxide
- Methane
- Dinitrogen oxide
- Nitrous oxide
- Total CO2 equivalent

### Use table for GHG emissions

<table>
<thead>
<tr>
<th>GHG Emissions released to the environment (CO2 equivalent)</th>
<th>Flows to the Environment</th>
<th>Total use of emissions</th>
</tr>
</thead>
</table>
## SF-MST Tables: Employment

<table>
<thead>
<tr>
<th>Sex</th>
<th>Number of jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
</tr>
</tbody>
</table>

### Age (years)

- <20
- 20-29
- 30-39
- 40-59
- >60

### Education level (ISCED-11 classes)

- Basic
- Intermediate
- Advanced

### Occupation (by ISCO major groups)

- Managers
- Professionals
- etc

### Job tenure (months)

- <6
- 6-12
- 13-24
- >24

### Salary (relative to average earnings)

- <30% average earnings
- 30-50% average earnings
- 50-70% average earnings
- >70% average earnings
Integrating spatial areas

- SF-MST recognises that supporting decision making on sustainable tourism must go beyond only national level data
- Underlying concepts are scale independent: question of relevance and feasibility as to scale of measurement in practice
- Not all concepts need to be measured at every spatial scale
- Proposed hierarchy of spatial areas to consider **tourism destinations**
  - Global
  - Supra-national
  - National
  - Regional
  - Municipal / City-region
  - Local
SF-MST recommends developing, progressively, a **regional tourism information system (R-TIS)**

**Core themes of interest within an R-TIS:**

- Visitor flows including both international and domestic visitors
- Accommodation
- Characteristics of tourism businesses in the region
- Visitor expenditure
- Employment and jobs in tourism industries
- Decent work
- Resident population
- Household income (average and distribution)
- Environmental flows: water use, energy use, GHG emissions, solid waste
- Land use and land cover
Innovation.
Consensus.
Information.

Measuring tourism for the betterment of people, planet and prosperity