The Importance of Measurement for Key Sustainability Initiatives of UNWTO

Cordula Wohlmuther
MST Symposium
14-16 December 2022
a. One Planet Sustainable Tourism Programme
   - Glasgow Declaration
   - Global Tourism Plastics Initiative
   - Food Waste Roadmap

b. International Network of Sustainable Tourism Observatories (INSTO)
One Planet Sustainable Tourism Programme

To accelerate climate action and the integration of circularity in the tourism value chain through commitments that:

- provide consistent frameworks,
- support capacity building,
- trigger action at scale.
The Glasgow Declaration is a catalyst for increased urgency about the need to accelerate climate action in tourism and to secure strong actions and commitment to support the global goals to halve emissions over the next decade and reach Net Zero emissions as soon as possible before 2050.
Signatories commit to:

• Support the global goals to halve emissions by 2030 and reach Net Zero by 2050 at the latest

• Deliver climate plans within 12 months and implement them

• Align with 5 pathways: measure, decarbonize, regenerate, collaborate, finance

• Report publicly on an annual basis

• Work in a collaborative spirit
**Five Pathways**

**Measure**
Measure and disclose tourism-related emissions using methodologies aligned with UNFCCC for transparency.

**Decarbonize**
Set and deliver targets aligned to reduce emissions, with offsets playing only a subsidiary role.

**Regenerate**
Restore and protect ecosystems, supporting nature’s ability to draw down carbon, and leading to better balance with nature.

**Collaborate**
Share evidence of risks and solutions with all stakeholders and strengthen governance for action at all levels.

**Finance**
Ensure organizational resources and capacity are sufficient to meet objectives set out in climate plans.
Technical Brief on Measuring Tourism

Greenhouse Gas Emissions:

An overview of the state of current measurement tools and methodologies and recommendations for ways forward
Global Mapping of Tools and Methodologies

- **March 22**: Establish Initial Dataset & Criteria
- **April 22**: Create Initial Assumptions
- **May 22**: Test and Refine Dataset and Criteria
- **June-Sep 22**: Test and Refine Assumptions into Analysis and Guidance
- **Oct-Nov 22**: Test Guidance in order to finalise report

**Steps:**
- Desk Research and Interviews
- Working Group Discussions
- Final Consultation
The sample under review

- Respondents of Global Survey on Climate Action in Tourism
- Glasgow Declaration Signatories
- Tourism Declares Signatories
- Tourism companies in Science-based Targets Initiative
- Companies participating in WTTC NetZero Roadmap
The criteria to assess tools and methodologies

<table>
<thead>
<tr>
<th>Pertinence</th>
<th>Relevant for Glasgow Declaration signatories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Which scopes are being measured</td>
</tr>
<tr>
<td>Practicality</td>
<td>Does it include guidance for setting a baseline, metrics and targets and tracking progress</td>
</tr>
<tr>
<td>Replicability</td>
<td>Track record and usefulness for SMEs</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Freely available (priority) or available with a cost</td>
</tr>
</tbody>
</table>
Takeaways for Accommodation

1. Hotel Carbon Measurement (HCMI) widely used
2. Many still designing own solutions
3. New tools offering simplified approaches
Takeaways for Tour Operators

1. Differing operating models make measurement more challenging
2. No consensus over inclusion (or not) of international aviation
3. Larger businesses turning to consultants or onboarding climate experts
Takeaways for Destinations

1. Most complex challenge when understanding roles, boundaries, etc
2. Least well served in terms of resources
3. Input/Output models evolving to support national measurement of tourism emissions
1. Promote the benefits of measurement (financial, social and environmental)

2. Find consensus around boundaries and measurement responsibilities

3. Prioritise usability over precision to scale up engagement

4. Provide tailored guidance for different stakeholder groups

5. Engage larger players to catalyse support for SMEs

6. Advance climate risk valuations, measurement of mitigation potential of nature based solutions, non-carbon benefits, etc.
The Global Tourism Plastics Initiative unites the tourism sector behind a common vision to address the root causes of plastic pollution. It enables businesses, governments, and other tourism stakeholders to take concerted action, leading by example in the shift towards circularity in the use of plastics.
Signatories commit to:

• A vision of a circular economy for plastics

• Eliminate problematic or unnecessary plastic items and packaging

• Integrate reuse models or reusable alternatives

• Collaborate to increase recycled content and recycling and composting rates

• Report publicly and annually on progress made
130 organizations are signatories of the Global Tourism Plastics Initiative
GTPI Plastics Measurement Methodology for Accommodation Providers
Introduction to the Methodology

- GTPI (UNEP, UNWTO, EMF) and the Sustainable Hospitality Alliance
- Technical assistance from Greenview
- Supporting GTPI signatories
- Developed with industry insights and expertise (GTPI and SHA networks)
## Reporting Metrics

### Mandatory, Requested & Additional

<table>
<thead>
<tr>
<th>Mandatory</th>
<th>Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Annual total weight of plastics (metric tonnes)</td>
<td>• Percentage of compostable plastics out of annual weight (metric tonnes) of plastics purchased/used.</td>
</tr>
<tr>
<td>• Weight of plastics per guest night (metric tonnes)</td>
<td></td>
</tr>
<tr>
<td>• Absolute difference in total annual weight in plastics used between years (metric tonnes)</td>
<td></td>
</tr>
<tr>
<td>• Percentage difference in total annual weight in plastics used between years (%)</td>
<td></td>
</tr>
<tr>
<td>• Percentage difference in plastics intensity (weight per guest night) between years (%)</td>
<td></td>
</tr>
<tr>
<td>• Weight of plastic eliminated since baseline year (metric tonnes)</td>
<td></td>
</tr>
</tbody>
</table>
## Prioritised Items

<table>
<thead>
<tr>
<th>Category I</th>
<th>Category II</th>
<th>Category III</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Garbage bags</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Mini toiletry bottles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Packaging around dry room amenities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Stirrers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Straws</td>
<td></td>
<td></td>
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<tr>
<td>• Takeaway containers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Takeaway cups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Takeaway cup lids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Takeaway cutleries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Toothbrushes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Water bottles (below 750ml)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bags and packaging for chips and sweets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cling film</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Disposable plastic plates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Laundry bags (for collection)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Plastic beverage bottles (below 750ml)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sachets or packets for single-serve condiments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Takeaway bags</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Takeaway condiment containers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Toothpaste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Remaining 74 items</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Auditing and Verification

- GTPI does not conduct data verification nor audit GTPI signatories.
- **Best practice** to undertake data verification or audit.
- Indicate whether or not data was verified or audited in **annual reporting**.
- Indicate any **plans for future verification**, and timescale.
- Signatories should **aim to have robust and regular audits** of their data, with a full third party audit taken at least once before 2025.
Global Roadmap on Food Waste Reduction in Tourism

A consistent framework for tourism stakeholders to embrace the sustainable management of food so that it never becomes waste.

Sustainable Gastronomy

Food waste
Targets and Milestones

Accommodation

- By 2030, halve food waste per guest night
- Divert 100% of food waste from landfill or where the infrastructure does not exist divert 50% by 2030.

Cruise

- By 2030, halve food waste per guest day
- Increase capacity on-board (or in port) to process 100% of residual food waste, avoiding the need to discharge to sea by 2030.
To demonstrate progress the following information is required:

<table>
<thead>
<tr>
<th>Accommodation and Cruise Sectors</th>
<th>Diversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Total Food waste per annum (tonnes)</td>
<td>i. Total Food waste per annum (tonnes)</td>
</tr>
<tr>
<td>ii. Total Number of Guest Days or Nights per annum</td>
<td>ii. Total Food waste to landfill (tonnes)</td>
</tr>
<tr>
<td>iii. Food waste (kg) per Guest Day or Night</td>
<td>iii. % Food waste to landfill</td>
</tr>
</tbody>
</table>

Comparable and Additional Intensity Metrics:
- Food waste per square meter
- Food waste per revenue dollar
- Food waste per total food handled
Measurement Methodologies

- WWF Hotel Waste Measurement Methodology
- WRAP Food Loss and Waste Data Capture Sheet
- UNEP Resource Efficiency Data and Performance Monitoring Tool
- Smart Meters and bespoke tools
Support to signatories and tourism stakeholders:

- **Knowledge management**: Trainings, participatory development of methodologies and research.
- **Monitoring and reporting**: Reporting platform, guidance on measurement of plastic footprint.
- **Advocacy and communications**: High-level events, online events, awareness raising campaigns.
A NETWORK OF TOURISM OBSERVATORIES
monitoring sustainable tourism development
AT DESTINATION LEVEL

The UNWTO International Network of Sustainable Tourism Observatories (INSTO) is a network of tourism observatories monitoring the economic, environmental and social impact of tourism at the destination level. The initiative is based on UNWTO’s long-standing commitment to the sustainable and resilient growth of the sector through measurement and monitoring, supporting the evidence-based management of tourism.
Where we welcome Observatories that are committed to base their sustainability development of tourism on

• evidence
• participatory approaches
• transparency

The network as such is a continuously growing network, where not quantity but commitment is the most important element of our thinking.
Meet the Members

State of Sao Paolo, Brazil

Azores
Portugal

Canary Islands
Spain

Bizkaya, Spain

Algarve
Portugal

Tobu
Indonesia

Toba
Indonesia

Mallorca
Spain

Sleman
Indonesia

Navarre
Spain

Sonoma California
USA

South West Australia
Australia

Buenos Aires
Argentina

Antigua Guatemala
Guatemala

Sao Paolo
Brazil

Adriatic Coast
Croatia

South Tyrol
Italy

Guanajuato
Mexico

Xishuangbanna
China

Pangandaran
Indonesia

Changshu
China

Aegean Islands
Greece

Jiangmen
China

Huangshang, Xidi, Hongcun
China

Sanur
Indonesia

Zhangjiajie
China

Yangshuo
China

Hunan
China

Bogota
Colombia

Adriatic Coast
Croatia

Yukon
Canada

Meet the Members

State of Sao Paolo, Brazil

Bizkaya, Spain

Malaga, Spain
Rules for the operation and management of the UNWTO INSTO (Framework)

- 104th Session of Executive Council, Luxor, Egypt, November 2016

- Guides the establishment and functioning processes of observatories

- Independent and legally separate entity from UNWTO

Pre-establishment Phase
Application and Acceptance Process
Mandatory Issue Areas
Monitoring and Reporting
Communication and Information-sharing
1. Application form
- General information about the applicant
- KML file indicating monitoring area
- Overview relevant stakeholders
- Statement of the status of UNWTO
- Commitment to the principles of the UNWTO Global Code of Ethics for Tourism

2. Destination profile
- Generic background on the destination
- Information on tourism flows
- Some economic basic data
- Information on structural framework

3. Preliminary study
- Situation analysis: destination level
- Key sustainability issues
- Current monitoring activities and structures
- Data needs, availability, gaps, sources
- Objectives – short, medium, long term
- Proposed structure
- Details on relevant stakeholders
- Completion of basic economic data sheet

4. Letters of support
- From relevant institutions
- National/regional/local tourism authority
- Responsible governing body

5. Submission
- Submit documents to INSTO Secretariat / SDT
  INSTO@UNWTO.ORG

6. Acceptance letter
11 Mandatory issue areas

- Tourism Seasonality
- Employment
- Destination Economic Benefits
- Governance
- Local Satisfaction
- Energy Management
- Water Management
- Waste Water (Sewage) Management
- Solid Waste Management
- Accessibility
- Climate Action
Mallorca

Departament de Turisme i Esports
Consell de Mallorca

Declaració institucional, Mallorca Observatori del Turisme Sostenible

El 24 de juliol de 2020 la presidentsa del Consell Insular de Mallorca va presentar públicament la candidatura de Mallorca per ser Observatori de Turisme Sostenible (OTS), xarxa internacional de l’Organització Mundial del Turisme.

Amb data 14 de gener, la Fundació Mallorca Turisme, institut integrat en el CIM que té per finalitat promoure tota activitat que tingui com a objectius promoure el turisme a Mallorca, està últimament prestando soles per presentar oficialment la candidatura de Mallorca el mes de gener de 2021.

El CIM va crear-ne en 2004 amb l’objectiu d’impulsar la millora contínua de la sostenibilitat i col·laborar en la capacitat de recuperació del sector turístic mitjançant la vigilància sistemàtica i periodística dels resultats de l’impacte del turisme, a fi de compondre millor l’ús dels recursos en tot el món i fomentar la gestió responsable del turisme.

Amb la seva incorporació, Mallorca serà el tercer observatori dels 15 existents a l’espai europeu, al qual cosa suposarà aportar a Mallorca amb la seva incorporació creixement dels serveis de decisió bàsic per a la nostra ciutat i la seva gestió turística.

El Consell ha preservat la seva ideologia i, així, no ha impulsat la coordinació d’estats, convocatessos per tal de donar, de manera conjunta i coordinada, tots els elements de sostenibilitat i seguretat.

L’Observatori proporcionarà una aixa efectiva per monitoritzar,Objectives soes, l’impacte econòmic, social i mediambiental del turisme a Mallorca.

Cera aquesta manera, es podrà mitjancar els elements de pressa de decisió, amb informació puntual i contextualitzada d’objectius i mantinguts o millors.

L’estitut permetrà veure els serveis de decisió bàsic per a la nostra ciutat com són el desenvolupament sostenible, l’aprovatament contant dels avanços tecnològics i la cura del patrimoni natural.

Amb la finalitat de donar poder a la candidatura de Mallorca per integrar la xarxa d’OTS, es proposa al CIM que la presidenta dels integrats de Alice, signi en el costat de suport a la candidatura de Mallorca Observatori de Turisme Sostenible.

(+81) support letters
ANNEX I: A Detailed Description of the Indicators the Mallorca STO Will Monitor

The information on data sources, included in the tables, is merely descriptive. The Mallorca STO will carry out an initial detailed analysis by groups of indicators and individual KPIs, showing which indicators are official, from the Baleric Islands Statistical System, INE, and their synonyms in English, which KPIs are calculated by STO stakeholders and which indicators are or will be specific to the Mallorca STO.

ANX.1.1: Sets of Mandatory Indicators

ANX.1.1.1 Local satisfaction with tourism

The Baleric Islands’ Tourism Strategy Agency, AETIB, a stakeholder of Mallorca’s STO, carries out a biannual survey to determine residents’ attitude towards tourism activity on the Islands. The basic objective of this survey is to follow the European Tourism Indicators System (ETIS), proposed by the European Commission, to take a sustainable approach to destination management:

- Percentage of residents who are satisfied with tourism in the destination (C.1.2)
- Percentage of residents who are satisfied with the impacts of tourism on the destination’s identity (C.5.1)

A sample survey is used for the Balearic Islands straining the population depending on whether they live in a tourist/non-tourism municipality, +/-20,000 inhabitants, age groups and sex according to the municipal registers in 2017. A total of 1,950 people were surveyed by telephone.

<table>
<thead>
<tr>
<th>Component of the area</th>
<th>Indicators</th>
<th>Method</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of local satisfaction with tourism</td>
<td>Percentage of residents who are satisfied with tourism in the destination</td>
<td>Y/A</td>
<td>AETIB</td>
<td>80% (2018)</td>
</tr>
<tr>
<td></td>
<td>Percentage of residents satisfied with the impacts of tourism on the destination’s identity</td>
<td>Y/A</td>
<td>AETIB</td>
<td>75.4% (2018)</td>
</tr>
</tbody>
</table>

ANX.1.1.2 Community attitude toward tourism

<table>
<thead>
<tr>
<th>Community attitude toward tourism</th>
<th>Indicators</th>
<th>Method</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local satisfaction with tourism, local culture, economy, authenticity and with other specific components of tourism</td>
<td>Y/A</td>
<td>AETIB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANX.1.1.3 Visitor – resident ratio

<table>
<thead>
<tr>
<th>Visitor – resident ratio</th>
<th>Indicators</th>
<th>Method</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tourists and visitors per 100 residents (EU)</td>
<td>Y/A</td>
<td>AETIB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Number of available rooms in commercial accommodation per 100 residents)</td>
<td>Y/A</td>
<td>AETIB</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Component of the area</th>
<th>Indicators</th>
<th>Method</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid waste management</td>
<td>Waste production per tourist night compared to general population waste production per person (kg/STO)</td>
<td>A</td>
<td>TINAD, EMVAC, CM</td>
<td></td>
</tr>
<tr>
<td>Percentage of tourism enterprises separating different types of waste (EU), SWMAT</td>
<td>A</td>
<td>TINAD, CM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of total waste recycled per tourist compared to total waste recycled per resident per year (STO)</td>
<td>A</td>
<td>TINAD, CM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANX.1.1.6 Solid Waste Management

<table>
<thead>
<tr>
<th>Component of the area</th>
<th>Indicators</th>
<th>Method</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid waste reduction</td>
<td>Volume of hazardous substances in use (volume of use over time), attributable to tourism (SWMAT)</td>
<td>Y/A</td>
<td>TINAD, EMVAC, CM</td>
<td></td>
</tr>
<tr>
<td>Waste collection system that maintains public records on the amount of waste generated (STO)</td>
<td>A</td>
<td>TINAD, EMVAC, CM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid waste management plan that is implemented and reflects quantifiable goals for minimising and ensuring safe disposal of waste (STO)</td>
<td>A</td>
<td>TINAD, EMVAC, CM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General Directorate of the Government of Balearic Islands
General Directorate of the Ministry of Environment, Regional Government of Balearic Islands
Annual Progress Report: South Tyrol, Italy

In the long-term, we plan to equip each of the 12 tourist areas with three indicators, selected with reference to international standards (i.e. European Tourism Indicators System for sustainable tourism area management - ETS). Global Sustainable Council Tourism Criteria for Destinations - GSTC-1), and one think tank related to innovation or emerging (but not yet recognized) issues in each field (see figure). We selected most indicators were in collaboration with different administrative and private stakeholders, and revised some indicators compared to 2019 used on stakeholders’ feedback. The current report includes 25 indicators, as the first report in 2016 did. The three indicators per tourism area are divided as follows: one indicator per each issue area is always general, and the further two illustrate specific phenomena of interest. The think tank is interpreted as an occurrence – usually during a working group workshop – to discuss innovative and groundbreaking innovations in the respective issue area by involving experts in the respective field. For instance, in the issue area “Employment”, the general indicator refers to changes in the hospitality and food-service sector, whereas the more specific indicators assess the percentage of female entrepreneurs and the citizenships of tourism employees.

Table 2 list of indicators and their classification. Source: own elaboration

| ISSUE AREA | INDICATOR | DESCRIPTION | PILLAR | TYPOLOGY (ETHOS) | SAD4
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Seasonality</td>
<td>Tourist arrivals by month and market</td>
<td>Economic</td>
<td>Demanding interest</td>
<td>Deserted work &amp; economic growth (E); Sustainable cities &amp; communities (S)</td>
</tr>
<tr>
<td>1.2</td>
<td>Number of visitors entering in peak months by municipality</td>
<td>Economic</td>
<td>Pressure</td>
<td>Deserted work &amp; economic growth (E); Sustainable cities &amp; communities (S)</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Number of visitors entering in peak months by municipality</td>
<td>Economic</td>
<td>Pressure</td>
<td>Deserted work &amp; economic growth (E); Sustainable cities &amp; communities (S)</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Employment</td>
<td>% of employees in the accommodation and food-service sector</td>
<td>Economic</td>
<td>Demanding interest</td>
<td>Deserted work &amp; economic growth (E)</td>
</tr>
<tr>
<td>2.2</td>
<td>Employment</td>
<td>% of female entrepreneurs in the accommodation and food-service sector</td>
<td>Economic</td>
<td>Special</td>
<td>Gender Equality (G)</td>
</tr>
<tr>
<td>2.3</td>
<td>Employment</td>
<td>Employees in the accommodation and food-service sector by citizenship</td>
<td>Economic</td>
<td>Social</td>
<td>No poverty (E); Deserted work &amp; economic growth (E)</td>
</tr>
</tbody>
</table>

Finally, the think tank addresses artificial intelligence (AI) and robotics in the hospitality sector, a major driver of change for the future with potentially disruptive social impacts. Think tank work as a source of monitoring key concerns in a qualitative change that their structure; because they cannot rely on existing data.

With this view to the subsequent creation of a general indicator for sustainability (e.g. using the standard by Polibio Perni, due to the growing focus on Pressure / Impact / Response (PIS)). This framework enables the classification of indicators based on their typology as: (a) driving forces of an impact (IF); (b) indicators of pressure on the environment (P); (c) indicators of the state of the environment (E); (d) indicators of impact manifested on the environment (E) and finally (e) indicators of response (R), typically undertaken by civil society to minimize impacts. Below is a table illustrating the indicators and their classification. Beside each indicator, a circular symbol helps the reader to identify the DPSIR typology, as well as in the pillar it refers to: a blue circle indicates the economic; a brown one the social; and a green one the environmental pillar.
Please visit the INSTO Repository of Tools and Resources

INSTO Technical Webinars on the 11 key issue areas
Thank you!

Cordula Wohlmuther
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