

Measuring the Sustainability of Tourism (MST): progress and way forward

Prepared by the World Tourism Organization Committee on Statistics

I. Introduction

1. Tourism a social, cultural and economic phenomenon that relies on and has an impact on the economy, the natural and built environment, the local population at the places visited, and on visitors themselves. Owing to this range of impacts and the wide spectrum of stakeholders involved, there is a need for a holistic approach to tourism development, management and monitoring. This approach is supported by the World Tourism Organization (UNWTO) in order to formulate and implement national and local tourism policies¹.
2. Tourism stakeholders are concerned with the sustainability of the sector itself, especially in the face of challenges like climate change and the Covid-19 pandemic. Increasingly, in tourism and beyond, stakeholders are also concerned with how tourism may support or deter efforts towards sustainable development more broadly. Indeed, the Sustainable Development Goals (SDGs) have three Goals (Goal 8, 12 and 14) that explicitly mention sustainable tourism (under targets 8.9, 12.b and 14.7).
3. The need for statistical data to monitor the sustainability of tourism is clear. However, the scope of existing international statistical standards for measuring tourism is largely economic. The *International Recommendations for Tourism Statistics* and the *Tourism Satellite Account: Recommended Methodological Framework* contain the main concepts, definitions, classifications and tables for describing:
 - a. tourism activity on the demand side (visitor flows, the characteristics of visitors, etc.),
 - b. the supply by tourism industries (accommodation, food/beverage serving activities, passenger transport, cultural activities, sports/recreational activities, etc.) and
 - c. the economic contribution from confronting demand and supply through the Tourism Satellite Account².

¹ United Nations and World Tourism Organization, *International Recommendations for Tourism Statistics 2008* (IRTS 2008), (New York, Madrid, 2008): https://unstats.un.org/unsd/publication/seriesm/seriesm_83rev1e.pdf

² The *International Recommendations for Tourism Statistics 2008* (IRTS 2008: https://unstats.un.org/unsd/publication/seriesm/seriesm_83rev1e.pdf) and the *Tourism Satellite Account: Recommended Methodological Framework 2008* (TSA: RMF 2008: https://unstats.un.org/unsd/publication/Seriesf/SeriesF_80rev1e.pdf)

4. Many countries have developed systems of tourism statistics in line with these international standards, producing data that is much welcomed by policy makers in tourism and beyond. At the same time, policy makers are insisting on the need to expand the system of tourism statistics to include the three dimensions of sustainability—environmental, social and economic—and to more explicitly consider subnational measurement. The SDG and the need to monitor sustainable tourism, both as part of the Global Framework and for thematic monitoring, only reinforces these needs.
5. In 2016 countries and other stakeholders called upon the UNWTO Committee on Statistics to initiate a programme towards Measuring the Sustainability of Tourism (MST). MST was launched with the strong support from countries and from international organizations like UN Statistics Division (UNSD) and International Labour Organization (ILO), acknowledging the long-term goal to propose international statistical standards and SDG indicators.
6. More recently, the Covid-19 pandemic is causing an unprecedented decline in tourism: 74% in 2020, back to levels of 30 years ago. This “is having dramatic social and economic consequences, and puts millions of jobs and businesses at risk,” warns UNWTO Secretary-General Zurab Pololikashvili. At the same time, “this crisis is an opportunity to rethink the tourism sector and its contribution to the people and planet; an opportunity to build back better towards a more sustainable, inclusive and resilient tourism sector that ensure the benefits of tourism are enjoyed widely and fairly.” To guide these efforts, data—relevant, integrated, timely and trusted data—is more important than ever.

II. Stakeholder Engagement to advance the Statistical Framework

2.1. Working Group of Experts on Measuring the Sustainability of Tourism

7. Sustainability in tourism, and its measurement, naturally cuts across a range of disciplines and entities. For this reason, the Committee requested UNWTO to, jointly with UNSD, set up a multidisciplinary and open Working Group of Experts on MST to lead the development of a Statistical Framework for MST. This group engages experts from national statistical offices, national tourism administrations, sub-national tourism administrations and observatories, international organizations, academia and private sector.
8. The Working Group of Experts on MST³ (WGE-MST) held its first meeting in October 2016 gathering more than 50 representatives with a balanced representation across regions and stakeholder groups. The main conclusion was that beyond being a technical exercise, developing and subsequently implementing a statistical framework for MST is very much a strategic endeavor requiring stakeholder engagement, inter-institutional coordination and political leadership.

³ <https://www.unwto.org/standards/working-group-of-experts-on-mst>



9. Throughout 2018, an important component of the work of the WGE-MST was the advancement of the research agenda and implementation activities of the Statistical Framework for Measuring the Sustainability of Tourism (SF-MST). Various conceptual research areas and cross-cutting research areas were identified. For each area, a sub-group was established with a lead author supported by a small number of experts to provide substantive contributions:
 - a. (1) the social sustainability of tourism, led by Italy
 - b. (2) employment in tourism industries, led by ILO
 - c. (3) defining spatial areas, led by France
 - d. (4) implementation strategy, led by Canada
 - e. (5) communication strategy, led by Sweden
 - f. (6) tourism SDG indicators, led by Austria
10. The second meeting of WGE-MST took place in October 2018 gathering again around 50 experts from a wide range of disciplines and agencies with a good geographical coverage. The participants reviewed and discussed methodological developments in the different draft chapters of the SF-MST.
11. All in all, the Working Group of Experts, including through the thematic sub-groups, has drafted more than 36 discussion papers advancing various conceptual and cross-cutting research areas that have fed the SF-MST.
12. The WGE-MST reports regularly on its progress to the UN Committee of Experts on Environmental-Economic Accounting (UNCEEA) and includes updates on its work in UNCEEA reports to the UN Statistical Commission.
13. For example, at the United Nations Statistical Commission's fiftieth session in, the UNCEEA tabled the *Linking the TSA and the SEEA: A Technical Note* prepared by UNWTO as a first steppingstone towards the MST Statistical Framework. It had been previously approved by both the UNWTO Committee on Statistics and the UNCEEA. The Technical Note provides concrete guidance for measuring some key environmental aspects of tourism and has since been integrated and taken further in the SF-MST.
14. More recently, at its Extraordinary Meeting in November 2020, the UNCEEA welcomed the further development of the SF-MST and collaboration between the Working Group of Experts and the UNCEEA.

2.2. Editorial Board

15. An editorial board was established to periodically review and provide substantive advice in the development and finalization of the Statistical Framework for. It is composed of experts from Austria, Cabo Verde, Canada, Mexico, Philippines, Saudi Arabia, Spain, the Statistical Office of the European Commission (Eurostat), the International Labour Organization (ILO), the UN Statistical Division (UNSD) and UNWTO.
16. More specifically, the mandate of the editorial board is to (a) review the papers prepared by the various sub-groups working on the conceptual issues; (b) review the

draft statistical framework for MST before it is submitted for global consultation; (c) review the comments received through the different rounds of consultations; (d) ensure that the comments received are taken into account; and (e) strive for consensus on solutions on the identified issues.

2.3. UNWTO Committee on Statistics / Consultations

17. The Measuring the Sustainability of Tourism programme has been a priority of the UNWTO Committee on Statistics since its launch in 2016. In its seventeenth meeting in 2017, the UNWTO Committee on Statistics approved the annotated outline of the SF-MST and the MST research programme, and noted the progress made by some pilot countries (Canada, Netherlands, Fiji, Mexico and Italy).
18. Following the first worldwide consultation of the SF-MST that took place in the framework of the [6th International Conference on Tourism Statistics: Measuring Sustainable Tourism](#) (Manila, the Philippines, June 2017), a round of consultation on the updated draft SF-MST was launched among members of the UNWTO Committee on Statistics and members of the Working Group of Experts on MST from 5 February 2018 to 9 March 2018.
19. At its eighteenth meeting in February 2018, the UNWTO Committee discussed this draft as well as an initial proposal for an implementation strategy and a timeline on the steps ahead towards completion of the Framework. Pilot studies results, including an example of policy applications, were presented by Canada, Italy, Mexico, Philippines and Saudi Arabia.
20. All the comments received were incorporated in an updated version of the draft Statistical Framework for MST made available in October 2018. Another round of consultation among the members of the UNWTO Committee on Statistics and the WGE-MST took place in November 2018.
21. For transparency purposes as well as wide involvement not only of the statistical community in national statistical offices and international agencies but also the broader tourism and environmental communities, all information on the development of MST is available on the UNWTO website including the draft SF-MST, comments from the consultations, outcomes of the meetings, work of the sub-groups and pilot countries.
22. At its 19th meeting⁴, the UNWTO Committee reaffirmed the scope of SF-MST as intended from the beginning (economic, environmental and social dimensions, at national and sub-national scales) and welcomed the drafting of a new chapter dealing with indicators. It was agreed that the Editorial board, with the advice of the subgroups, would review all the comments received and incorporate them in a new version of the SF-MST. The Committee also agreed with the general proposed structure for a staged implementation of MST presented by Canada, lead of the subgroup on implementation.

⁴ Documents and list of participants are available at: http://statistics.unwto.org/committeestat_19thmeeting



The Committee did not have a regular meeting in 2020 but held an Extraordinary Meeting in December 2020⁵ limited to elected Member States and the Secretariat. It was agreed to reinvigorate Measuring the Sustainability of Tourism stressing the Committee's support to the MST process, both at the technical and political level, and in view of the presentation of the Statistical Framework for MST at the UN Statistical Commission.

2.4. High level acknowledgements of MST

23. The United Nations Statistical Commission at its forty-eighth session⁶ in 2017 “supported the development of the SF-MST⁷ by the Working Group of Experts on Measuring the Sustainability of Tourism of the World Tourism Organization, which will include the development of indicators for sustainable tourism, measurement at the subnational level and pilot projects”. Interventions from the African group of countries, the CARICOM group of countries, Cuba, Indonesia, Mongolia, Malaysia, Mexico, Kenya on behalf of Africa, Austria, Belize, Oman, Morocco, Spain, Fiji, the Philippines and Guyana welcomed the work.
24. On the occasion of the 2017 UN International Year of Sustainable Tourism for Development, UNWTO and UNSD organized a special seminar on MST⁸ in the framework of the forty-eighth session of the United Nations Statistical Commission. High-level panelists from the National Statistical Institutes of Austria, Canada, Fiji, and the Philippines presented their countries' MST pilots.
25. Measuring the Sustainability of Tourism was the overall theme of the [6th International Conference on Tourism Statistics](#) held in Manila, Philippines, in June 2017. The Conference gathered 1,500 leaders and experts from 88 countries including ministers, chief statisticians, policy experts, statisticians, private sector, academics, civil society and international organizations dedicated to this topic. All parties supported the 1st draft of the MST Statistical Framework and the roadmap towards its completion. The [Manila Call for Action on Measuring Sustainable Tourism](#) adopted there embodies a global commitment to MST for measuring the full dimensions of tourism and encourages presentation of the Statistical Framework for MST to the UN Statistical Commission.
26. UNWTO's governing bodies have called for and supported the development of MST through various Executive Council decisions and General Assembly resolutions over the years. Progress on MST is regularly reported to the UNWTO Executive Council, through the reports of the UNWTO Committee on Statistics, and to UNWTO's Regional Commissions. The UNWTO General Assembly at its twenty-second session (Chengdu, China, 2017) endorsed the Manila Call for Action on Measuring Sustainable Tourism. At its twenty-third session (Saint Petersburg, Russia, 2019), the UNWTO General Assembly supported the global consensus process towards

⁵ Information to become available at: <https://www.unwto.org/standards/unwto-committee-on-statistics>

⁶ Decision 48/115 on Tourism Statistics in the Report on the forty-eighth session of the UN Statistical Commission: [E/2017/24-E/CN.3/2017/35](https://unstats.un.org/unsd/statcom/48th-session/side-events/20170308-2L-accounting-and-statistics-for-sustainable-tourism/)

⁷ The “Statistical Framework for Measuring the Sustainability of Tourism” was initially named “Statistical Framework for Measuring Sustainable Tourism”. The change in the name has been agreed upon by the Working Group of Experts on Measuring the Sustainability of Tourism at its 2nd meeting held on October 2018.

⁸ See <https://unstats.un.org/unsd/statcom/48th-session/side-events/20170308-2L-accounting-and-statistics-for-sustainable-tourism/>

United Nations endorsement of international recommendations for Measuring the Sustainability of Tourism (MST) at the UN Statistical Commission.

27. The SF-MST under development has been endorsed by various policy frameworks at national and international level, such as the AIUla Framework for Inclusive Community Development Through Tourism⁹ endorsed by the G20 Leaders' Declaration.

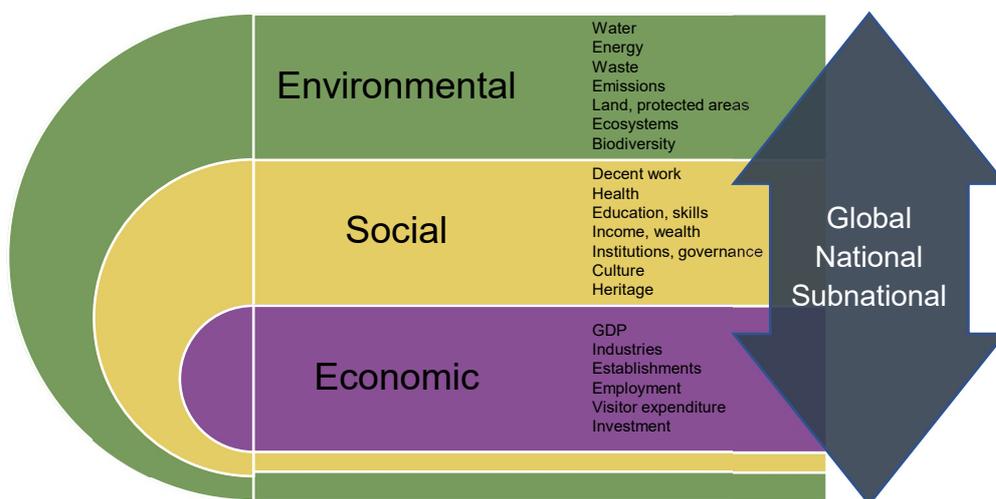
III. Measuring the Sustainability of Tourism

3.1. The Statistical Framework for Measuring the Sustainability of Tourism (SF-MST)

28. The Statistical Framework for Measuring the Sustainability of Tourism (SF-MST) consists of a standard framework for collecting, organizing and disseminating relevant information. SF-MST integrates tourism statistics with other economic, social and environmental information and provides a coherent base for deriving indicators that are relevant for monitoring and analysing the sustainability of tourism.

29. In this way, MST makes visible what has often been invisible in the data: the connections between tourism's economic, social and environmental effects and dependencies. For example, an important feature of the SF-MST is the linking of the Tourism Satellite Account (TSA) and the System of Environmental-Economic Accounting (SEEA).

30. A visual summary of the MST framework under development is shown below, presenting the key measurement areas pertaining to tourism's economic, social and environmental sustainability. Annex 1 shows the current structure of the MST Statistical Framework document.



31. The framework considers data for global, national and subnational levels. Of course, not all measurement areas will be equally relevant in all countries nor at all spatial

⁹ <https://www.e-unwto.org/doi/book/10.18111/9789284422159>

levels. The Framework is comprehensive but aims to be sensitive to users' needs, encouraging a modular implementation focused on priority areas.

3.2. Testing and implementation of the SF-MST

32. Several countries have carried out pilots including Austria, Canada, Fiji, Germany, Italy, Mexico, the Netherlands, Philippines, Samoa, Saudi Arabia, Sweden, Thailand and Vietnam. Additional countries in Africa, the Caribbean and Europe have expressed interest in developing MST pilots, and some have already or are preparing assessment studies for doing so. The pilot studies serve two main purposes: (1) to test the framework under development from the perspectives of both relevance and feasibility, and (2) to feed the ongoing development of the framework with lessons and novel or pragmatic solutions encountered on the ground.
33. UNWTO (2020) compiled some of these in [Experiences from Pilot Studies in Measuring the Sustainability of Tourism: A synopsis for Policy Makers](#) which shows that some pilots are already feeding policy discussions and initiatives such as Tourism Master Plans.
34. A sub-group on implementation, as part of the Working Group of Experts on MST, was led by Canada. It proposed a structure for a staged implementation of MST including the outline for an implementation toolkit that comprises: an introductory module on MST in capacity building and technical cooperation initiatives, core tables and indicators, an implementation roadmap for countries, a readiness assessment tool, identification of testing methods, and support for implementation.
35. In term of capacity development, a first training module on MST took place for countries in the Asia-Pacific, as part of a Workshop on Tourism Satellite Accounts held in Bangkok (Thailand) in December 2019. It was organized by UNESCAP and UK Aid in partnership with UNWTO. UNWTO and the Caribbean Tourism Organization are currently organizing a virtual training Workshop on Tourism Statistics for countries in the Caribbean, which includes a module on MST.

3.3. MST based indicators for monitoring the Sustainable Development Goals

36. The MST programme, through the subgroup on SDG indicators of the Working Group of Experts on MST supported by the UNWTO Committee on Statistics, has also been active in the development of indicators for monitoring the role of tourism in the Sustainable Development Goals.
37. The subgroup focused on the conceptualization and development of indicators for monitoring tourism in SDGs, coordinating with the Inter-agency and Expert Group on SDG (IAEG-SDG). It proposed indicators for monitoring the Targets that mention sustainable tourism (8.9 and 12.b under UNWTO custodianship, and 14.7 under custodianship of FAO). The subgroup also proposed a set of indicators for goals and targets beyond those explicitly mentioning tourism. These were discussed in the WGE- MST which made recommendations to the UNWTO Committee on Statistics, which in turn submitted the relevant recommendations to the IAEG-SDGs on various occasions.

38. Two of these indicators proposed have been included in the SDG Indicator Framework for Global Monitoring, and UNWTO reports the data it compiles from countries to the Global SDG Indicators Database:
 - a. 8.9.1 on Tourism direct GDP to supporting monitoring Target 8.9 on the promotion of sustainable tourism that creates jobs and promotes local culture and products
 - b. 12.b.1 on the level of implementation of standard accounting tools (i.e. the Tourism Satellite Account (TSA) and the System of Environmental Economic Accounts (SEEA)) to monitor the economic and environmental aspects of tourism sustainability in Target 12.b which calls for the development and implementation of tools to monitor sustainable tourism.
39. UNWTO started compiling these data from countries in 2019 and launched the first dataset in 2020 which feeds the Global SDG Indicators Database.
40. The UNWTO Executive Council at its 108th session encouraged the Committee on Statistics, with the support of the MST Working Group of Experts, to continue liaising with the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs) to ensure the technical soundness and feasibility of indicators for monitoring the role of tourism in the SDGs.

IV. Way forward

41. An updated version of the SF-MST is expected to be sent for consultation with the WGE-MST in March - April 2021. The Editorial Board will incorporate the comments received in preparation for the 20th meeting of the UNWTO Committee on Statistics.
42. Within the framework of the United Nations Statistical Commission's fifty-second session, a side event will be organized to present the progress on MST and country pilots.
43. The Technical Committee on the SEEA Central Framework will be invited to review and provide comments to ensure consistency with the SEEA. Progress on MST, and the Statistical Framework, will be presented to the UNCEEA.
44. The WGE-MST and the Editorial Board are expected to meet again to review the new version of the SF-MST in advance of the Global Consultation. It is expected that the global consultation be carried out jointly between UNSD and UNWTO and engage National Statistical Offices as well as UNWTO constituents (National Tourism Administrations and Affiliate Members from the private sector, academia and civil society).
45. The Statistical Framework for MST will be presented to UNWTO's governing bodies for their endorsement, including the UNWTO Executive Council and UNWTO General Assembly.



46. The Statistical Framework for MST is expected to be finalized by the Editorial Board after the global consultation and agreed upon by the WGE-MST. It will be presented to the UNCEEA for review, whereupon the Editorial Board will incorporate comments. The WGE-MST will subsequently submit it to the UNWTO Committee on Statistics for its endorsement before its presentation to the UN Statistical Commission.

Annex 1.

Statistical Framework for Measuring the Sustainability of Tourism Table of Contents (provisional)

1. Introduction

- 1.1. Measuring tourism activity
- 1.2. Advances in understanding sustainable tourism
 - 1.2.1. History of sustainable tourism policy and measurement
 - 1.2.2. Challenges in measurement
- 1.3. A statistical approach to measuring the sustainability of tourism
 - 1.3.1. Approaches to measuring sustainability
 - 1.3.2. Measuring the sustainability of tourism
- 1.4. Overview of the SF-MST
 - 1.4.1. The nature and role of SF-MST
 - 1.4.2. Components of the SF-MST
 - 1.4.3. Conceptual coverage of SF-MST
 - 1.4.4. Applying an accounting approach
 - 1.4.5. Implementation and application of SF-MST
- 1.5. Structure of the SF-MST document

2. Accounting for the economic dimension

- 2.1. Introduction
- 2.2. Key aspects of tourism statistics and the TSA framework
 - 2.2.1. Tourism statistics
 - 2.2.2. Measuring visitor flows
 - 2.2.3. The TSA framework
- 2.3. Measuring the economic activity of tourism
 - 2.3.1. Accounting for characteristics of tourism establishments
 - 2.3.2. Accounting for the supply and demand aspects of tourism activity
 - 2.3.3. Accounting for tourism fixed assets and related infrastructure
 - 2.3.4. Assessing seasonality
 - 2.3.5. Measuring topics of special interest
- 2.4. Measuring the employment aspects of tourism
 - 2.4.1. Introduction
 - 2.4.2. Measures of employment and jobs
 - 2.4.3. Human capital and characteristics of employment in tourism industries
 - 2.4.4. Measuring occupations within the tourism industries

3. Accounting for the environmental dimension

- 3.1. Introduction
- 3.2. Key aspects of the SEEA framework
- 3.3. Accounts for environmental flows for tourism industries
 - 3.3.1. Introduction
 - 3.3.2. Accounts for water flows for tourism industries
 - 3.3.3. Accounts for energy flows for tourism industries
 - 3.3.4. Accounts for GHG emissions for tourism industries

- 3.3.5. Accounts for solid waste for tourism industries
- 3.3.6. Other environmental flows
- 3.3.7. Estimating the tourism share of environmental flows
- 3.3.8. Distinguishing the demand and the supply perspectives
- 3.3.9. Allocating environmental flows associated with transport activity
- 3.3.10. Estimating indirect environmental flows
- 3.4. Measuring environmental assets for tourism
 - 3.4.1. General features of measuring environmental assets
 - 3.4.2. Approaches to accounting for environmental assets
 - 3.4.3. Environmental asset accounts
 - 3.4.4. Environmental assets for tourism
 - 3.4.5. Accounting for water resources
 - 3.4.6. Accounting for wildlife and key species
 - 3.4.7. Land accounts for tourism
 - 3.4.8. Accounting for ecosystem assets
- 3.5. Tourism related environmental activity
 - 3.5.1. Environmental transactions related to tourism
 - 3.5.2. Employment in environmental activities

4. 4 Accounting for the social dimension

- 4.1. Introduction
- 4.2. A framing for the measurement of the social dimension
 - 4.2.1. Concepts in the measurement of the social dimension
 - 4.2.2. Perspectives on the social dimension in tourism activity
 - 4.2.3. Overall conceptual framing of the social dimension
- 4.3. Population groups and spatial scale
 - 4.3.1. Introduction
 - 4.3.2. Population groups
 - 4.3.3. Spatial scale
- 4.4. Measurement aspects for the social dimension
 - 4.4.1. Introduction
 - 4.4.2. General social indicators
 - 4.4.3. Decent work
 - 4.4.4. Institutions and governance
 - 4.4.5. Perception and experience
 - 4.4.6. Accessibility
 - 4.4.7. Culture and heritage

5. 5 Measuring the sustainability of tourism at sub-national levels

- 5.1. Introduction
- 5.2. Defining scales of measurement
 - 5.2.1. Terminology
 - 5.2.2. Applying statistical practice at different scales
 - 5.2.3. The application of accounting principles
 - 5.2.4. The need for coherent spatial boundaries
- 5.3. A regional tourism information system for measuring sustainability
 - 5.3.1. Introduction
 - 5.3.2. R-TIS Areas of measurement focus
 - 5.3.3. Approaches to compilation

- 5.4. Measuring sustainability for local tourism destinations
 - 5.4.1. Introduction
 - 5.4.2. Delineating local tourism destinations
 - 5.4.3. Measurement themes
 - 5.4.4. Compilation approaches and considerations

