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2<sup>nd</sup> UNWTO Working Group on  
Measuring Sustainable Tourism

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## Measuring Sustainable Tourism (MST)

SDG indicators and beyond



## Overview



1. Preliminaries
2. SDG indicators with direct link to tourism
3. Other indicators with link to tourism
4. Indicators - proposals
5. Conclusions

## Preliminaries



- The **UNWTO Committee on Statistics and the TSA**, in partnership with the **UN Statistics Division** and with the support of the **UN Statistical Commission**, is supporting the development of the “Statistical Framework for Measuring Sustainable Tourism” (**SF-MST**) within the MST initiative.
- In the **most recent Committee meeting** (27-28 February 2018) it has been decided to establish a sub-group to the Working Group of Experts on MST led by Statistics Austria on “Tourism Sustainable Development Goals (SDGs) Indicators” which will mainly focus on the conceptualization and development of SDG indicators in coordination with the formal process of the Inter-agency and Expert Group on SDG (**IAEG-SDG**) which concern:
  - the **tourism relevant SDG-indicators** for which UNWTO is Custodian Agency, and
  - the proposal of an **additional indicator set** comprising 10-15 indicators.

## SDG indicators with direct link to tourism (1)



- The **tourism relevant indicators**, for which **UNWTO** is foreseen as the **Custodian Agency** are:
  - **8.9.1:** Tourism direct GDP as a proportion of total GDP and in growth rate (Tier II),
  - **8.9.2:** Proportion of jobs in sustainable tourism industries out of total tourism jobs (Tier III), and
  - **12.b.1:** Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools (Tier III).
- However, in order to implement **future reviews of the indicator framework**, the following processes are foreseen:
  - **annual minor refinements** (including specifying or correcting a unit of measurement, clarification of terms, editorial changes, etc.), and
  - **two comprehensive reviews** of the indicator framework, whose results will be submitted for consideration and decision by the Statistical Commission at its **2020** and **2025** sessions.

## SDG indicators with direct link to tourism (2)



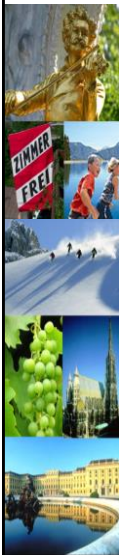
During the most recent meeting of the IAEG-SDGs (9-12 April 2018 in Vienna) the **following indicators** were proposed by UNWTO:

- **Indicator for Target 8.9:** Progress towards sustainable tourism
  - It is proposed to substitute 8.9.1 and 8.9.2 with a single indicator: **“Progress towards sustainable tourism”** with 3 sub-measures:
    - ✓ **Tourism Direct GDP:** This is defined in an international statistical standard adopted by UNSC (Tourism Satellite Account: Recommended Methodological Framework 2008)
    - ✓ **Employment in the tourism industries:** This is defined in an international statistical standard adopted by UNSC (International Recommendations for Tourism Statistics 2008).
    - ✓ **Energy use by the tourism industries:** This is defined within the “Statistical Framework for Measuring Sustainable Tourism” (SF-MST) under development and planned for discussion by the UNSC in 2020.
- **Indicator for Target 12.b:** Stage of implementation of the Statistical Framework for Measuring Sustainable Tourism

## Other indicators with link to tourism



- The UNWTO Committee on Statistics and the TSA considers that tourism may be relevant in **many more goals and targets beyond** those that explicitly mention sustainable tourism.
- An **additional set of indicators** around a “tourism theme” could be developed to complement the above indicators in order to support global and national monitoring for the SDGs.
- Therefore, the proposed indicators **should not be limited to the three SDG targets** that explicitly mention tourism, but should include indicators to inform other Goals or Targets where tourism might be relevant.
- This is in line with UN discussions to have a **“core”** global set of indicators **applicable to all countries** (approximately 100-120 indicators), complemented by a larger “thematic” set from which indicators can be “added on” and reorganized to more closely track national development priorities or certain themes (like tourism).



Tourism  
Direct Gross  
Domestic  
Product  
(TDGDP)

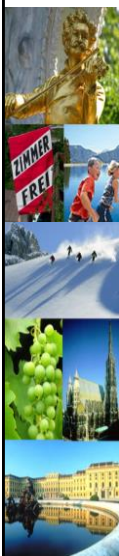


**TDGDP including the respective share related to total economy**



$$\frac{TDGDP}{Overall\ GDP} * 100 = \dots \%$$

- Data source: Tourism Satellite Account (TSA)
- TSA is not available in all countries; „Flash Tourism direct GDP method“ might be an alternative and feasible.



Persons  
employed in  
the tourism  
industries  
(FTE)



**Persons employed (full time equivalents; FTE) in the tourism industries (TI), including the respective share related to overall employment**



$$\frac{FTE\ in\ TI}{Overall\ FTE} * 100 = \dots \%$$

- Data source: TSA, Labor Force Survey (LFS) and Structural Business Statistics (SBS)
- Apart from TSA it is assumed that at least LFS and SBS do exist in countries.

## Indicators – economic sustainability



Intermediate consumption by hotels, etc. from domestic agriculture



Share of tourism intermediate consumption by hotels, restaurants etc. from domestic agriculture



$$\frac{\text{dom.agricult.products}}{\text{total interm.con.}} * 100 = \dots \%$$

- Data source: Input-Output-Tables, Supply-Use-Tables
- Agricultural domestic products part of intermediate consumption for hotels and restaurants.

## Indicators – social sustainability



Proportion of employed persons/employees in tourism industries



Proportion of employed persons/employees in tourism industries with school education compared to the share of overall population



$$\frac{\text{employed with school education in TI}}{\text{total employed in TI}} * 100 =$$

- Data source: LFS, TSA
- Definition of „school education“ i.e. primary, secondary school, kind of vocational schools, universities of applied sciences, etc. is needed

## Indicators – social sustainability



Share of women in tourism jobs



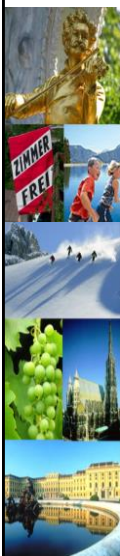
Share of women in tourism jobs (compared to the overall economy).



$$\frac{\text{women in tourism}}{\text{total employed in tourism}} * 100 =$$

- Data source: LFS, TSA-Table 7 (tourism industries), SBS (I55, I56)
- TSA-Table 7 is not available in all countries; „Tourism jobs“ refers to „tourism industries“; UNWTO compile data on FTE by status in employment and by gender

## Indicators – ecological sustainability



Share of final energy use related to TDGDP



Share of final energy use related to Tourism Direct GDP (TDGDP)



- Data source: Energy Balances, Energy Accounts, TSA
- Availability of detailed energy accounts and TSA might be questionable; linking TSA and SEEA

## Indicators – economic sustainability



### Occupancy rates for accommodation industry (based on beds)

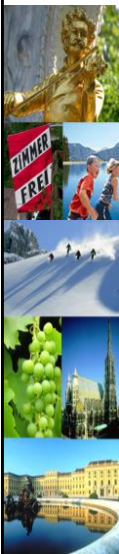


$$\frac{\text{bednights spent}}{\text{beds*days}} * 100 = .. \%$$



- Data source: Accommodation statistics, SBS
- Calculated value expressing the use of sleeping arrangements in a reporting period.

## Indicators – social sustainability



### Average earnings in tourism compared to national average.



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- Data source: Structure of Earnings Survey (SES; social statistics)
- Focus on accommodation (I55) and food&beverage (I56) sector is recommended.



Share of  
tourism  
exports related  
to total service  
exports

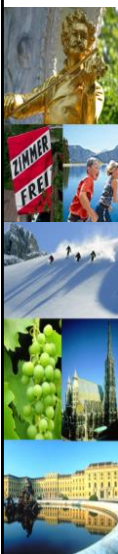


Share of travel exports related to total service exports



$$\frac{\text{tourism export}}{\text{service export}} * 100 = \dots \%$$

- Data source: TBoP, BoP (current account; Central Bank/IMF)
- TBoP concept is broader than that of tourism statistics.



Number of  
visitors per  
100 residents



Number of visitors per 100 residents



$$\frac{\text{number of visitors}}{100 \text{ residents}} =$$

- Data source: Accommodation statistics, population statistics
- Visitors: overnight tourists (same-day visitors' data is hardly available); UNWTO compiles data at national level in the Compendium of Tourism Statistics: visitors arrivals/ country population



## Indicators – social sustainability



Number of  
beds per 100  
residents



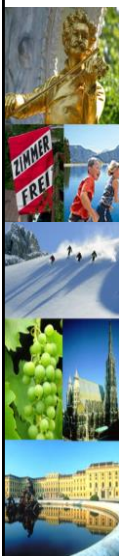
Number of beds in tourist  
accommodation per 100 residents



$$\frac{\text{number of beds}}{100 \text{ residents}} =$$

- Data source: Accommodation statistics, population statistics
- Commercial and non-commercial accommodation (both paid) should be considered.

## Indicators – ecological sustainability



Stage of  
implemen-  
tation of the  
SF-MST



Stage of implementation of the Statistical  
Framework for Measuring Sustainable  
Tourism



$$\frac{\text{provided tables}}{\text{total tables}} * 100 =$$

- Data source: Own survey
- I.e. number of filled in tables (major part) available, part of statistical program of NSIs, etc.

## Indicators – ecological sustainability



“Green-House-Gas” (GHG) emissions from tourism industries compared to total economy

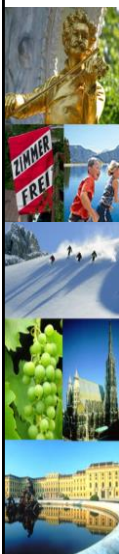


$$\frac{GHG\ TI}{total\ GHG} * 100 =$$



- Data source: Air emission accounts
- Air emission accounts not sufficiently detailed

## Indicators – ecological sustainability



Yearly change in protected areas in tourism destinations (e.g. area in hectare)



$$\frac{protected\ areas_{n+1}}{protected\ areas_n} * 100 - 100 =$$



- Data source: Data from local governments, e.g. national environment agencies, NGOs (WWF, Greenpeace), governmental National Park administration, etc.
- Protected areas (e.g. national parks, etc.) have to be defined.

## Indicators – ecological sustainability



Share of protected areas related to total area of a country



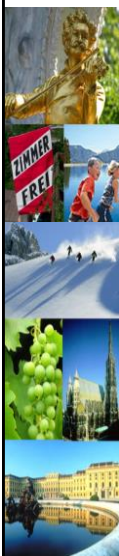
Share of protected areas related to total area of a country



$$\frac{\text{protected areas}}{\text{total area}} * 100 =$$

- Data source: Data from local governments, e.g. national environment agencies, NGOs (WWF, Greenpeace), etc.
- Measurement according to size of protected areas in relation to total area size of a country.

## Indicators – social sustainability



Change in rates of crime in tourism destinations



Change in rates of crime in tourism destinations



- Data source: Criminology statistics, ministry of interior (e.g. local police statistics)
- Data availability on tourism destination level might be difficult.



Implementation of SF-MST



Number of countries advancing implementation of the “Statistical Framework on Measuring Sustainable Tourism” (SF-MST)



➤ Data source: Surveys by UNSD and UNWTO



Implementation of TSA/SEEA



Number of countries implementing TSA and SEEA based frameworks



➤ Data source: Surveys by UNSD and UNWTO



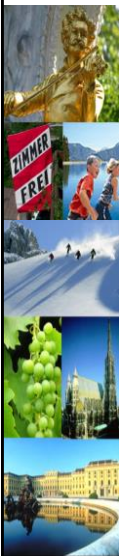
Gross Value Added (GVA) per persons employed



$$\frac{GVA}{\text{person employed}} =$$



- Data source: LFS, SBS
- Persons employed, expressed by “Full-time equivalents” (FTE)



Share (in %) of actual room-nights related to total possible room-nights



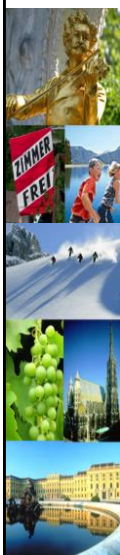
$$\frac{\text{room-nights spent}}{\text{rooms*days}} * 100 = \dots \%$$



- Data source: accommodation statistics, accommodation capacity statistics

## Indicators – economic sustainability

?



Seasonal distribution according to months



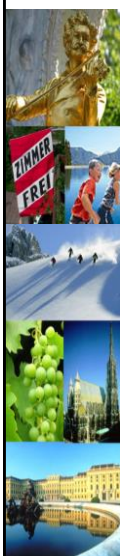
$$\frac{\text{nights by month}}{\text{total by year}} * 100 =$$



- Data source: accommodation statistics, border surveys
- The indicator is showing the fluctuations of tourism demand by months; tourism concentration in particular months might become visible.

## Indicators – ecological sustainability

?



Duration of stay (in nights spent)



$$\frac{\text{nights spent}}{\text{arrivals}} =$$



- Data source: Accommodation statistics, border surveys
- Short-term stays of guest (i.e. 1-3 days) contributing more to environmental pollution due to arrival and departure by car/airplane, in particular if periodicity of trips is high.



Migration of local population from tourism destinations

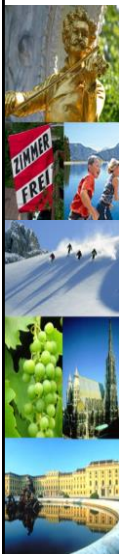


The indicator might indicate „overtourism“, in case the local population is migrating from tourism intensive destinations to tourism less intensive regions.



- Data source: Population statistics, migration statistics
- Data availability on regional disaggregated level might be questionable; tourism intensive destinations have to be defined (i.e. by tourism intensity). Changes of population according to population census might be the basis.

## Conclusions (1)



- **Relevant indicators** and measures can help to understand the **size of tourism**, its structure and its **interrelation with the ecological, social and economic environment**.
- They support to **manage tourism components** and their **relationship to the environment**.
- They permit **decision makers** (on local, regional, federal as well as national level) a broader view of the whole tourism system moving away from the traditional, one-sided economic approach.
- Building on indicators beyond those already considered for tourism within the scope of the 17 SDG goals (8.9, 12.b, 14.7), **more and additional work has to be done to**
  - clarify concepts,
  - develop agreed measurement definitions,
  - establish measurement boundaries and limits,
  - describe potential measurement techniques, and
  - support ongoing implementation and training.

## Conclusions (2)



Related to **indicators** the following has to be considered:

- **Sustainability can never be measured by indicators alone** (regardless of qualitative or quantitative or both): Profound knowledge of the whole region, its resources, geographic circumstances, economic pillars, (tourism) infrastructure, the cultural and historical framework etc. is needed.
- **Establishment of a regular monitoring system:** Doing analysis based on sustainable indicators requires a regular monitoring system which provides information on continuous basis revealing trends over time.
- Thus, the **development of indicators should be built on a range of existing statistical frameworks**, standards and classifications across the economic, social and environmental dimensions of sustainable tourism.
- In particular related to tourism for which nature and social stability is doubtless the prerequisite, **establishing indicators** is an **important initiative** to gain reliable information on tourism in its wider context.

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## Measuring Sustainable Tourism (MST)

SDG indicators and beyond