Overview of Measurement Efforts in the field of Energy Management by INSTO Members
18 May 2023
OVERVIEW INSTO MEMBERS

INSTO WEBINARS

TOOLS AND RESOURCES

OVERVIEW OF INDICATORS IN ENERGY MANAGEMENT
Overview INSTO Members (37)

State of Sao Paolo, Brazil
Canary Islands Spain
Azores Portugal
Algarve Portugal
Thompson Okanagan Canada
Toba Indonesia
Lombok Indonesia
Sleman Indonesia
Mallorca Spain
South West Australia
Antigua Guatemala
Navarre Spain
Buenos Aires Argentina
Sonoma California USA
Sao Paolo Brazil
Adriatic Coast Croatia
Xishuangbanna China
Alentejo Portugal
South Tyrol Italy
Pangandaran Indonesia
Guanajuato Mexico
Changshu China
Henan China
Aegean Islands Greece
Jiangmen China
Yangshuo China
Huangshang, Xidi, Hongcun China
Sanur Indonesia
Kanas China
Zhangjiajie China
Bogota Colombia
Yukon Canada
37 OBSERVATORIES

ASIA AND THE PACIFIC
14
1 Australia
8 China
5 Indonesia

AMERICAS
11
1 Argentina
2 Brazil
2 Canada
1 Guatemala
3 Mexico
1 Colombia
1 USA

EUROPE
12
1 Croatia
1 Greece
1 Italy
3 Portugal
6 Spain
VISION

Fostering a dynamic network of partners that strives towards creating healthy places for both visitors and the host communities while leaving resilient destinations to future generations.

TOOLS AND RESOURCES

A repository of tools and resources on the 11 mandatory issue areas that INSTO Observatories are required to monitor.

WEBINARS

Technical INSTO Webinar on Energy Management
12 May 2022

Technical INSTO Webinar on Economic Benefits
13 April 2022

Technical INSTO Webinar on Solid Waste Management
11 March 2022

Technical INSTO Webinar on Employment

2021 Global Virtual INSTO Meeting on

Technical INSTO Webinar on: Climate Action
## INSTO Webinar on Energy Management 2022

### TECHNICAL PRESENTATION

<table>
<thead>
<tr>
<th>International Renewable Energy Agency (IRENA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mr. Adrian Whiteman</em>, Consultant-Energy Statistics of Knowledge, Policy and Finance Centre (KPFC)</td>
</tr>
</tbody>
</table>

See Presentation
See Video

### PRESENTATION BY INSTO MEMBER

<table>
<thead>
<tr>
<th>Sustainable Tourism Observatory of South Tyrol (STOST), Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Prof. Dr. Anna Scuttari</em>, Project Manager, Senior Researcher at the Center for Advanced Studies, Eurac Research</td>
</tr>
</tbody>
</table>

See Presentation
See Video

<table>
<thead>
<tr>
<th>Sustainable Tourism Observatory of Malaga, Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mr. Alfonso Palacios</em>, Industrial Engineer and Project Manager, Department for Urban Innovation and Digitalisation, Malaga City Council</td>
</tr>
</tbody>
</table>

See Presentation
See Video

<table>
<thead>
<tr>
<th>The Yukon Sustainable Tourism Observatory, Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Ms. Lisa Christensen</em>, Sustainable Tourism Research Analyst, Department of Tourism and Culture, Tourism Branch, Government of Yukon</td>
</tr>
</tbody>
</table>

See Presentation
See Video
Repository of Tools and Resources

A Repository of Tools and Resources on the 11 mandatory issue areas that INSTO Observatories are required to monitor:

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


**PRESENTATIONS**

**Smart Mobility - The Future of Transportation.** Discussion at the Second UNWTO World Conference on Smart Destinations (06/2018).


**OTHER RESOURCES**

**Data and Statistics.** International Renewable Energy Agency (IRENA).

**Measuring the Sustainability of Tourism (MST).** UNWTO

**System of Environmental Economic Accounting (SEE).** United Nations
## Components of the climate change issue: mitigation

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Indicators</th>
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</table>
| Greenhouse gas emissions by the destination and by the tourism component | • Total CO₂ produced due to the community’s energy consumption;  
• Consumption of fossil fuels by the tourism sector (see also Energy p. 152). |
| Transportation fuel use | • Total consumption per capita of fossil fuels for transportation;  
• Total consumption of fossil fuels in the destination for tourist transportation (note also issue section on Transportation p. 210). |
| Energy consumption related to temperature control | • Number and % rooms with air conditioning and/or heating. |
| Coverage of natural areas | • % of natural area coverage in the territory of the destination (change over time). |

## Components of the issue

### Measuring energy use and conservation
- Per capita consumption of energy from all sources (overall, and by tourist sector – per person day) ➔ Baseline Indicator  
  Note: can also be used as derived indicator of energy use per resident relative to energy use per tourist.

### Energy management programs
- Percentage of businesses participating in energy conservation programs, or applying energy saving policy and techniques ➔ Baseline Indicator

### Use of renewable energy sources
- % of energy consumption from renewable resources (at destinations, establishments) ➔ Baseline Indicator;  
  - Number, % of establishments (e.g. hotels) using renewable sources, generating own energy (see Box 3.27 re energy sources).

### Environmental impacts of air travel
- **Energy consumption** (total consumption and consumption per passenger km) (see Energy management p. 152);  
- Atmospheric pollution (total emission of greenhouse gases by airline/flight, emission per passenger km).

### Impacts of airports and related infrastructure
- Land occupation (% of destination territory within airport boundary, % of territory altered);  
- % or number of access roads with severe traffic congestion (beyond design capacity or in state of failure);  
- Noise (area affected by noise around airports and runways);  
- Congestion: Number of hours spent by average tourist using airport.

### Socio-economic concerns related to air travel
- Total public expenditure on airport infrastructure (as % of total destination budget, an per passenger);  
- Cost of safety and security measures (total and per passenger);  
- Number of employees to be trained in the air transport system per tourist;  
- Cost of skills and training for airport personnel;  
- % of annual costs (operations and capital) covered by revenues at airport from different sources.
Analysis of indicators used by Observatories

- Overview of available indicators from UNWTO, European Tourism Indicator System (ETIS), GSTC, OECD and others
- Applied indicators by INSTO members
- Data sources
✓ **New ones: e.g.**

Electricity consumption by ski lifts and snow cannons

Number of charging stations offered for e-mobility in accommodation facilities and public spaces
Energy Management Indicators Overview from INSTO Observatories

List of *Energy Management* indicators taken from Preliminary Reports and Annual Reports 2019-2022

**Often used Indicator:**
Per capita consumption of energy from all sources (overall, and per tourist sector - per person day)

**Often used Indicator:**
% of energy consumption from renewable resources (at destinations, establishments)
<table>
<thead>
<tr>
<th>INSTO INSIGHTS Webinar</th>
<th>Tentative Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Satisfaction</td>
<td>Wednesday, 7 December 2022</td>
</tr>
<tr>
<td>Tourism Seasonality</td>
<td>Thursday, 26 January 2023</td>
</tr>
<tr>
<td>Water Management</td>
<td>Thursday, 23 February 2023</td>
</tr>
<tr>
<td>Economic benefits</td>
<td>Thursday, 16 March 2023</td>
</tr>
<tr>
<td>Solid Waste Management</td>
<td>Thursday, 8 June 2023</td>
</tr>
<tr>
<td>Energy Management</td>
<td>Thursday, 18 May 2023</td>
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<tr>
<td>Wastewater Management</td>
<td>Thursday, 22 June 2023</td>
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<tr>
<td>Accessibility</td>
<td>Thursday, 6 July 2023</td>
</tr>
<tr>
<td>Employment</td>
<td>Thursday, 14 September 2023</td>
</tr>
<tr>
<td>Annual INSTO Meeting 2023</td>
<td>Thursday and Friday, 19—20 October 9-10 November 2023</td>
</tr>
<tr>
<td>Climate Action</td>
<td>Thursday, 16 November 2023</td>
</tr>
<tr>
<td>Governance</td>
<td>Thursday, 7 December 2023</td>
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THANK YOU!