



# Improving evidence-based decision making in the tourism sector

A review of the current discussions of  
measurements of sustainable development  
indicators (SDIs) for enterprises

**UNWTO Tourism Statistics Special  
Workshop**

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# Background of the study

Sustainable Development Goals (SDGs)

The United Nations Conference on Sustainable Development,  
Rio+20, 2012



# Background of the study

- Comparing apples and pears - Different metrics, units, measures and reporting strategies
- There is a need to develop targets that could be monitored through a comparable and robust indicator system



# This presentation

- Analyses the diversity of metrics and approaches around measuring performance in the environment indicator dimension of SDGs at the enterprises level (CO<sup>2</sup>, energy, water and waste)
- Further, it focuses on the analysis of recommendations stated in the literature



# Methodology I

- **Data**
  - Analysis of CSR (Corporate Social Responsibility) reports of 10 major global hotel chains
- **Methodology**
  - Content analysis is used to categorize information stated in CSR in three main categories:
    - basic indicators and metrics,
    - efficiency or management related indicators,
    - technology indicators



# Methodology II

Literature review on the main research and initiatives on the standardization is conducted

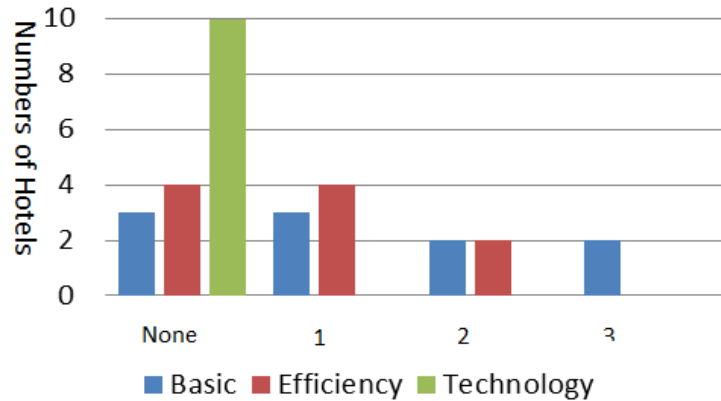


# Results I - Analysis of CSR reports

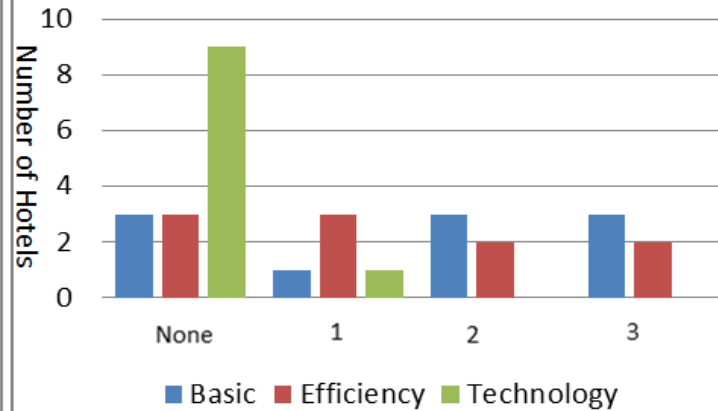


# Results I

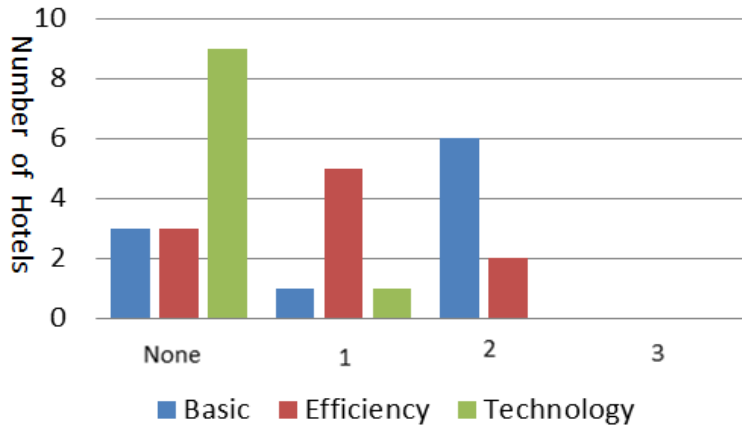
Number of CO2 indicators



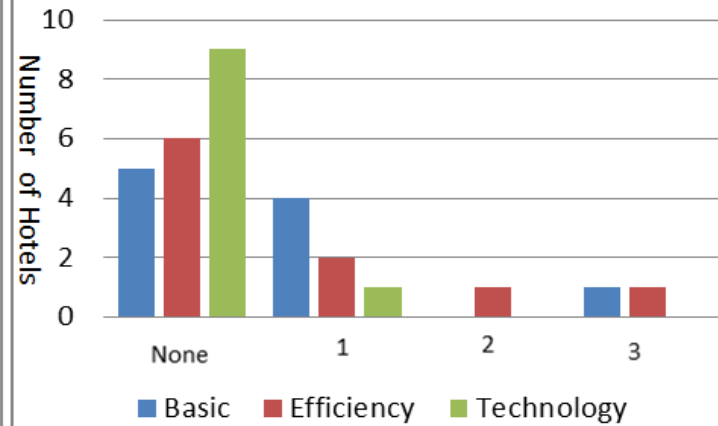
Number of Energy indicators



Number of Water indicators



Number of Waste indicators





# Results I

	Metrics	Use
<b>All</b>	% or kg CO <sup>2</sup> , KWH energy, m3 water or kg waste Reduction achieved	High
<b>CO2</b>	No. Trees planted	Low
	kg CO <sup>2</sup> offset	Low
<b>Energy</b>	KWH per types of energy or fuel	Low
	KWH green energy purchased	Low
<b>Water</b>	% or m3 Water use in water scarce/non-water scarce regions	Low
	m3 Wastewater treatment	Low
	Recycle grey water	Low
<b>Waste</b>	Total dry waste (lb or kg)	Low
	Total wet waste (lb or kg )	Low
	Total recycling (lb or kg)	Low
	kg Recycling by type	Low



# Results II – Literature analysis



# General considerations

- Unit of measurement
- Type of measurement
- Period of measurement
- Boundaries



# General considerations

Unit of measurement	Type of measurement	Period of measurement	Boundaries
<b>Kg for CO2</b> <b>KWH for energy</b> <b>Liters for water</b> <b>Kg for waste</b>	Total	Month	Life cycle considerations; Sub-national perspective
	Intensity (guest) - Per Guestnight (GN)		
	Intensity (hotel) - per square foot, meter, other		
	Context sensitivity		
	“Positive effects”		



# Major issues in SDIs and metrics

- “*How to measure*” - a lack of harmonized units of measurements
- “*What to measure*” - measuring only basic indicators, while ignoring efficiency- and technology-related aspects. Negative impact vs. positive effects
- The context sensitivity
- Seasonality
- Multiple aspects of the value chain



# Recommendations

How to measure:

Apply harmonized units – this report outlined some of the harmonized metrics for the energy, CO<sup>2</sup>, water and waste that can be easily applied to the tourism sector

- Kg for CO<sub>2</sub>
- KWH for energy
- Liters for water
- Kg for waste



# Recommendations

What to measure:

- Total and Intensity (for guest and hotel) measures
- Context sensitivity and the “displacement effect”
- Important to measure both negative and positive aspects



# Recommendations

Where and when to measure:

- Monthly reporting should be, wherever possible, given preference
- Need to consider consumption taking place throughout the entire life cycle, including supply, manufacturing, use, and disposition of a product







# Thank you!

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