



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**

Nara, Japan, 17-21 November 2014

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 (CO², 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

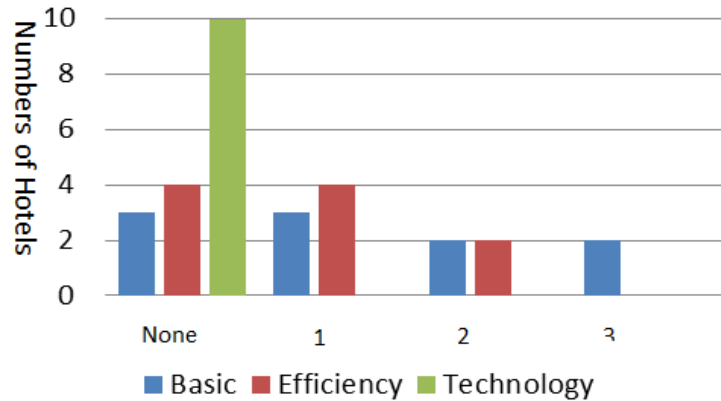


Results I - Analysis of CSR reports

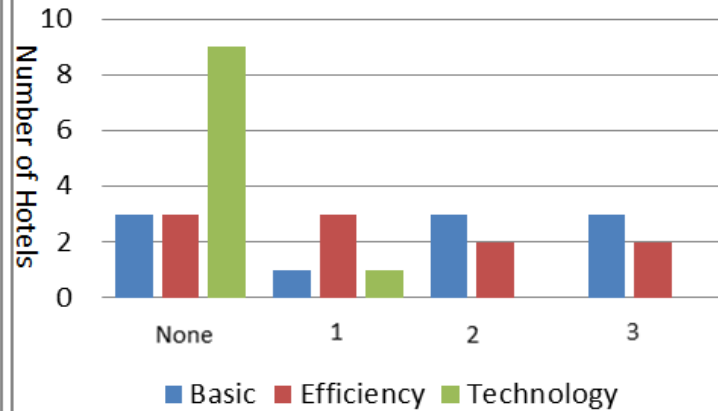


Results I

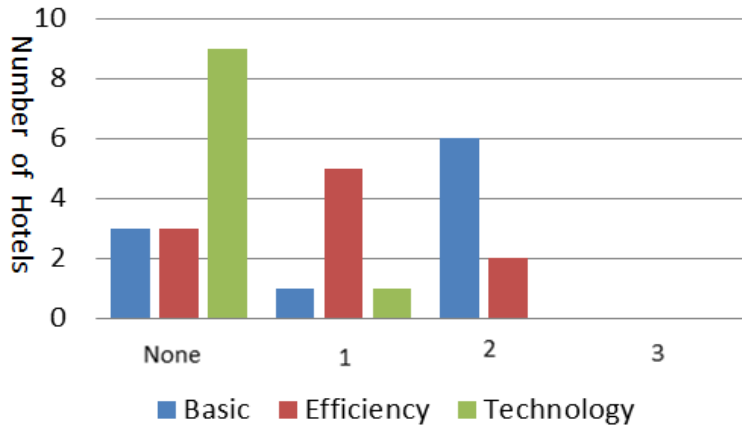
Number of CO2 indicators



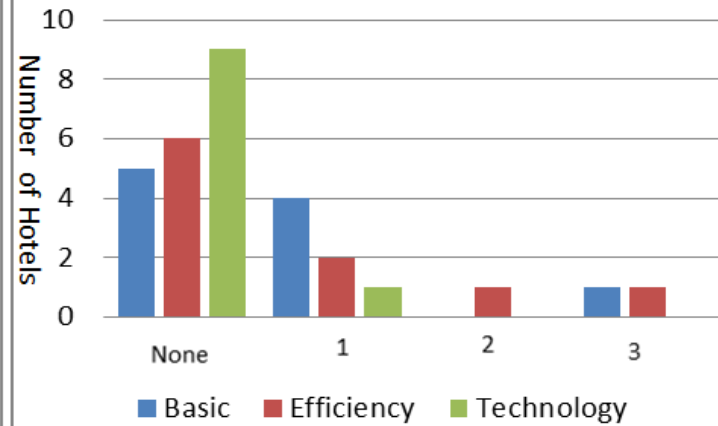
Number of Energy indicators



Number of Water indicators



Number of Waste indicators



Results I

	Metrics	Use
All	% or kg CO ² , KWH energy, m ³ water or kg waste Reduction achieved	High
CO2	No. Trees planted	Low
	kg CO ² offset	Low
Energy	KWH per types of energy or fuel	Low
	KWH green energy purchased	Low
Water	% or m ³ Water use in water scarce/non-water scarce regions	Low
	m ³ Wastewater treatment	Low
	Recycle grey water	Low
Waste	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
Kg for CO2 KWH for energy Liters for water Kg for waste	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, CO², water and waste that can be easily applied to the tourism sector

- Kg for CO₂
- 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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