



## Scales of sustainability data collection: From global to local tourism level

Raúl Hernández Martín  
Head of the Chair in Tourism CajaCanarias-Ashotel  
University of La Laguna

 **Cátedra de Turismo  
CajaCanarias-Ashotel**  
Universidad de La Laguna

  
Unidad Mixta de Investigación  
Instituto Canario de Estadística (ISITAC)  
Universidad de La Laguna ULL

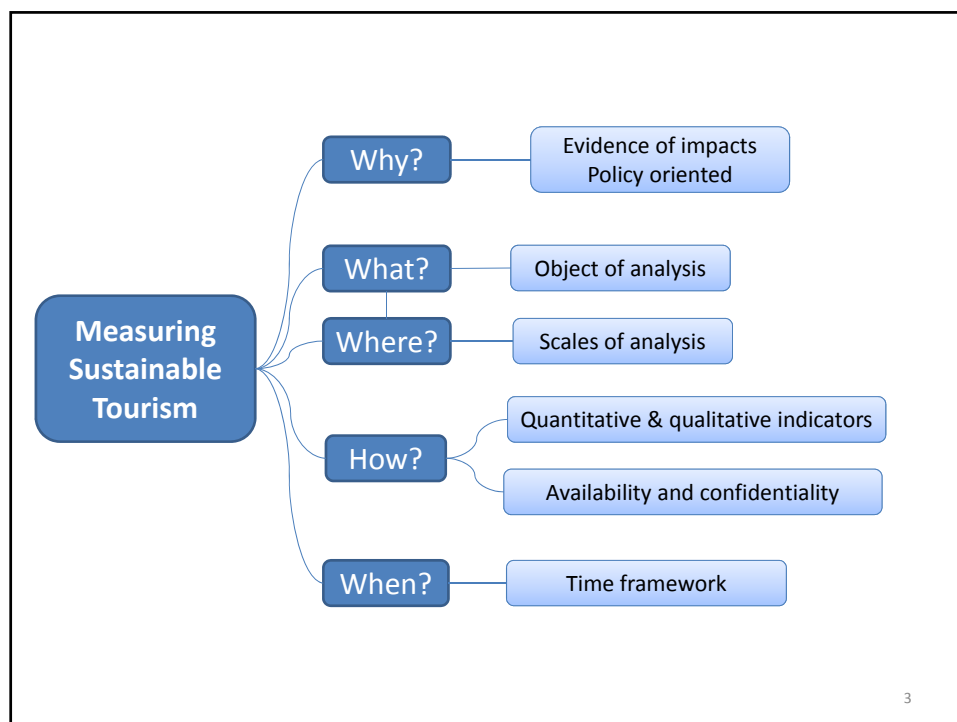
  
INRoute  
International Network  
on Regional Economic,  
Mobility and Tourism

1

## Introduction

- Despite 25 years of research on tourism sustainability (Bramwell et al., 2017)
  - No international consensus on **methodology** for **measurement**
- Sustainable development goals for 2025 suffer from the same difficulty:
  - Measurement and indicators.
- UNWTO launched the *Measuring Sustainable Tourism* (MST) initiative
  - Linking measurement to **UN statistical standards**
  - Linking tourism sustainability to 2030 development goals (**policy oriented**)
  - Recognition of the relevance of the **local approach**
  - **A document with methodological recommendations is expected for 2020**
- **Learnings** from an ongoing pilot study on the Canary Islands. Focus local scale

2



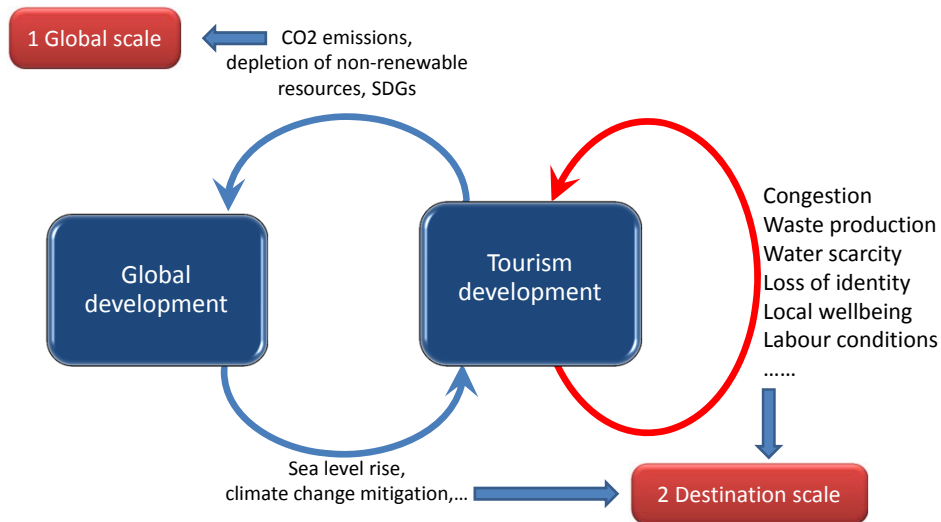
Why? Evidence of impacts  
Policy oriented

**'Overtourism'?**  
Understanding and Managing Urban  
Tourism Growth beyond Perceptions  
Executive Summary

UNWTO CELTH Centre of Expertise Breda University Stenden etfi

4

# Evidence on impacts of tourism

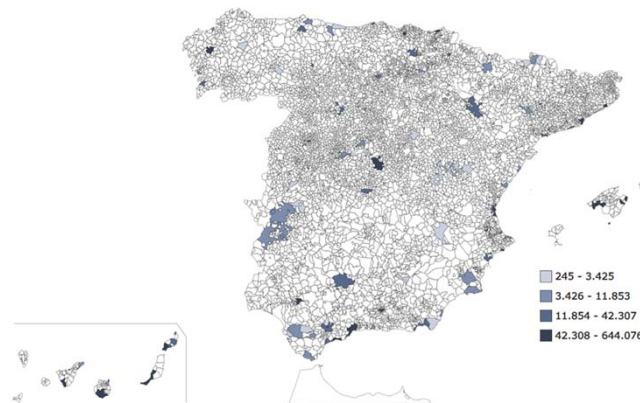


5



## The relevance of the destination approach

1% of municipalities in Spain account for 63.5% of tourism overnights and, thus, for most tourism sustainability problems



6

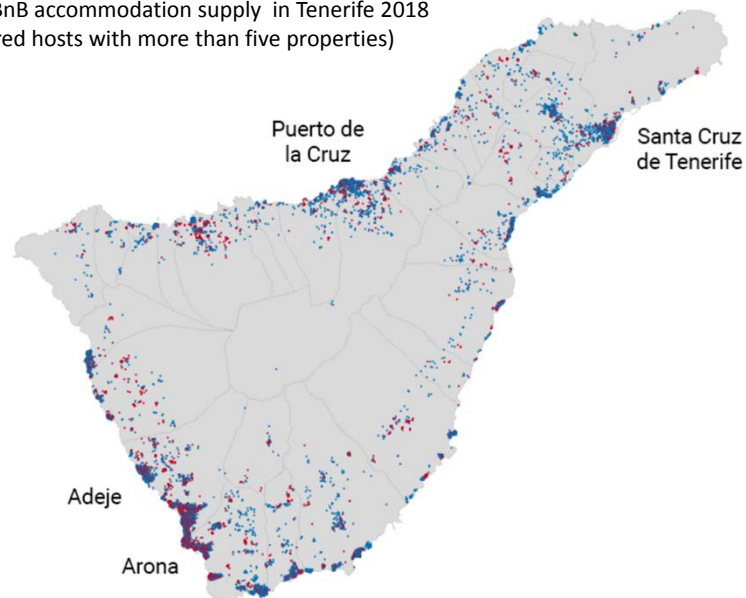
AirBnB accommodation supply in Barcelona province 2018  
(in red hosts with more than five properties)



Source: DataHippo

7

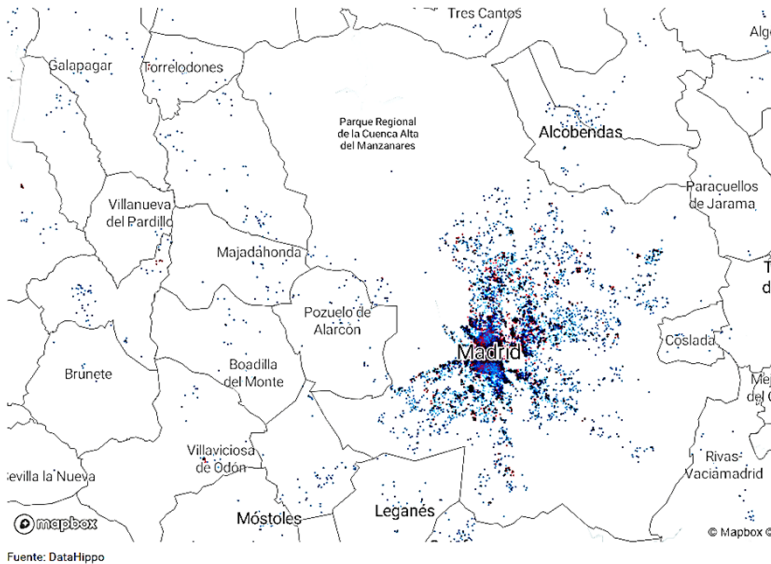
AirBnB accommodation supply in Tenerife 2018  
(in red hosts with more than five properties)



Source: DataHippo

8

AirBnB accommodation supply in Madrid municipality 2018  
(in red hosts with more than five properties)



9



## The relevance of the destination approach. Growing concerns about overtourism

STUDY  
Requested by the TRAN committee



### Research for TRAN Committee - Overtourism: impact and possible policy responses



Transport and Tourism

10

## Policy issues in MST



**Contribution of tourism to global sustainability**



**Sustainability of local tourism destinations**



11

**What and where?**

3 dimensions of sustainability

3 approaches to sustainability

Scales of analysis

Identifying local tourism destinations

Indicators

12

## Complexity of measurement of tourism sustainability



13

## Three approaches to tourism sustainability



Sustainability of tourism industry



Sustainability of tourist (visitor) behaviour



Sustainability of tourism destinations

14

### Three scales of analysis of sustainable tourism Hall, Gossling & Scott (2015)



Macro level (global): some indicators. Policy decision-taking challenge



Meso level (national/regional): Fairly good indicators and methods. No clear tourism sustainability problem. Clear governance.



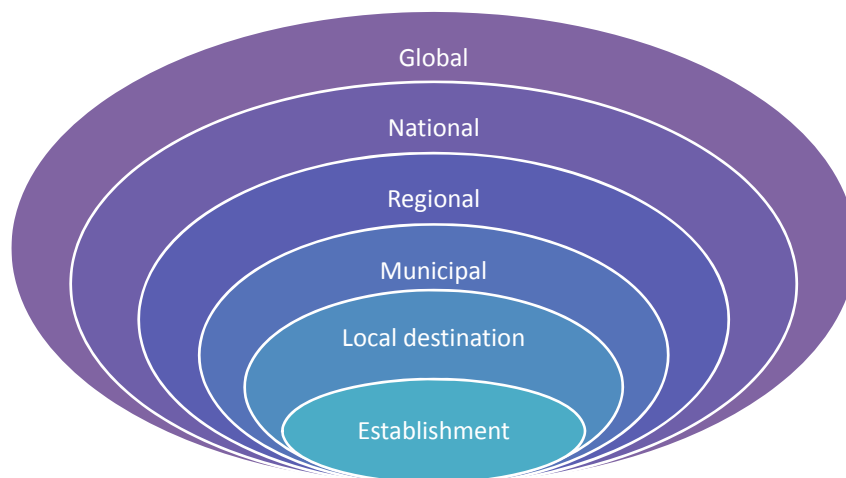
Micro level (destination): specific sustainability problems. Lack of indicators. Governance problems.

Three scales not clearly connected!

15



### Scales of analysis of tourism sustainability



16





## Contribution of tourism to global sustainability

- **Comments:**
  - Accumulative scales of analysis
  - Available international methodologies
- **Economic:** Tourism Satellite Accounts (TSA, 2008)
- **Environmental:** System of Environmental Economic Accounting (EEA, 2012): water, resources and energy consumption, greenhouse gas emissions, waste, green jobs, etc.
- **Social:** world heritage sites, poverty alleviation,...<sup>17</sup>

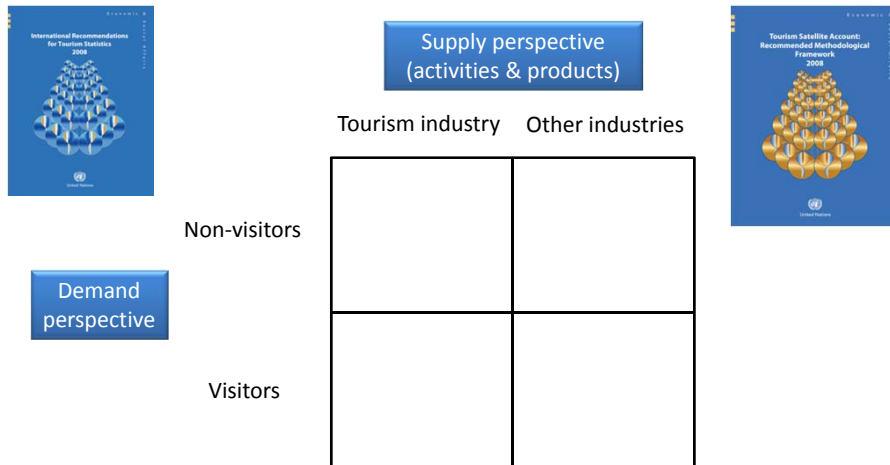


## Sustainability of local tourism destinations

- **Comments:**
  - Visitors + tourism industry + local population + environment
  - There are System of indicators (some initiatives)
  - Local singularities, relevance of perceptions of stakeholders
  - Additive indicators: energy consumption, waste, water consumption
  - Non-additive indicators (air purity, quality of sea water)
- **Economic:** income, local control, decent jobs,...
- **Environmental:** water quality, biodiversity, air quality, waste management, sea water quality, green firms,...
- **Social:** education, health, poverty, wealth distribution, crime, corruption, job security, gender inequality, protection of heritage, respect of traditional values,....

18

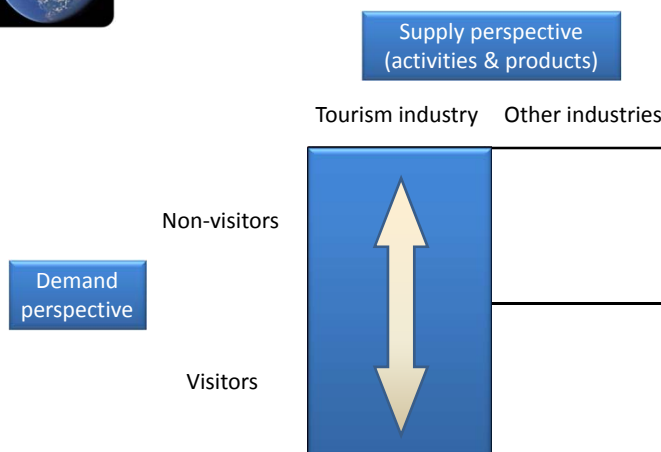
## International statistical standards regarding tourism measurement (IRTS, 2008 & TSA, 2008)



19



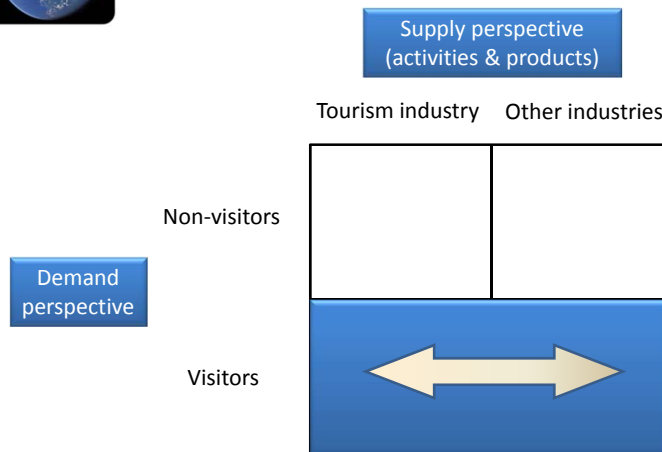
## Global approach: Supply



20

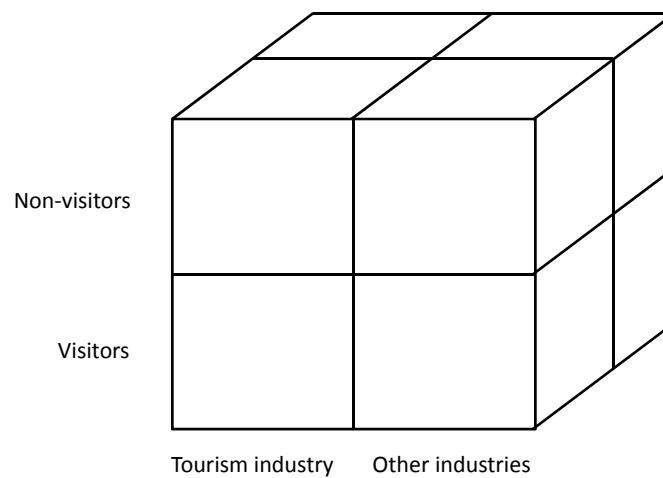


## Global approach: demand



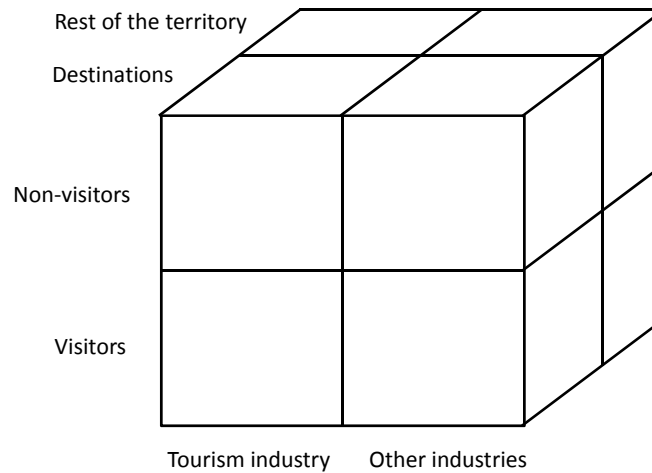
21

## Extended framework for sustainable tourism



22

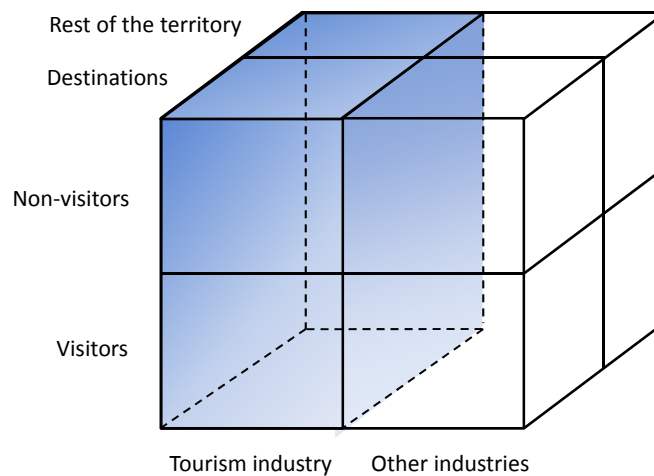
## Extended framework for sustainable tourism



23



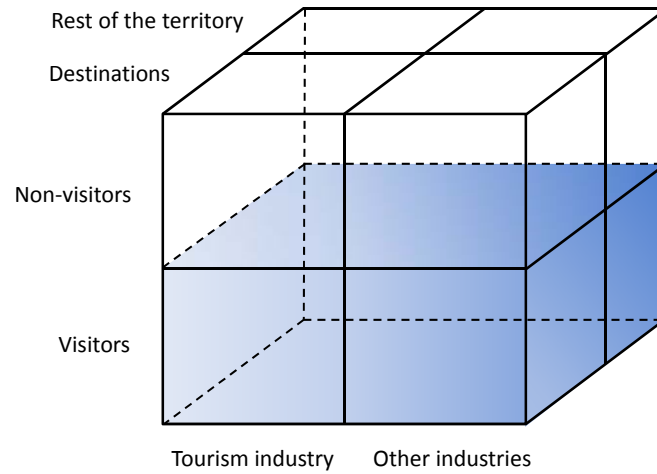
## National / regional supply perspective



24



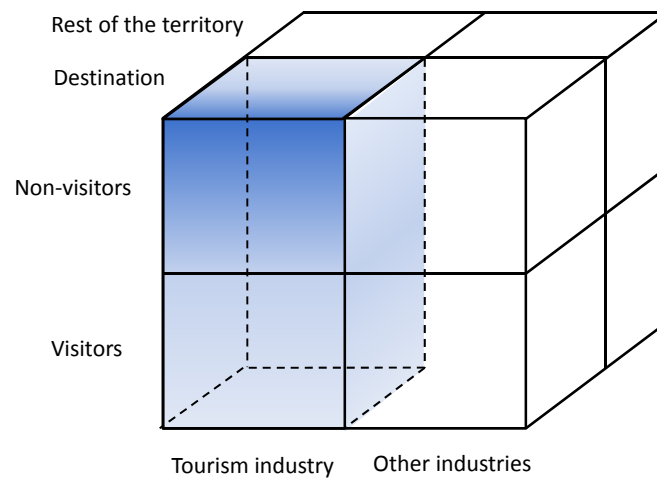
## National / regional demand perspective



25



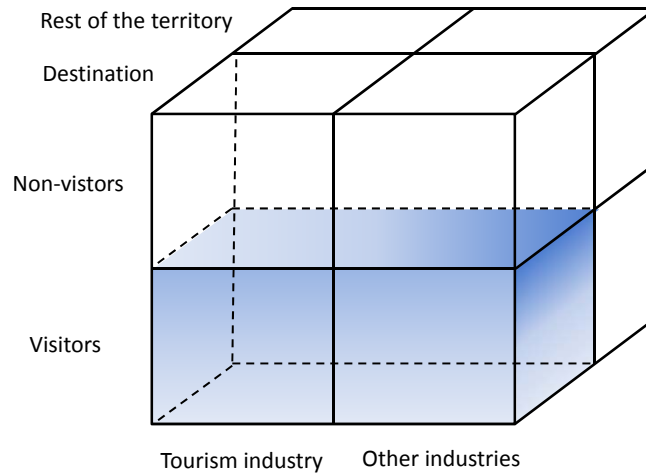
## Destination supply perspective



26



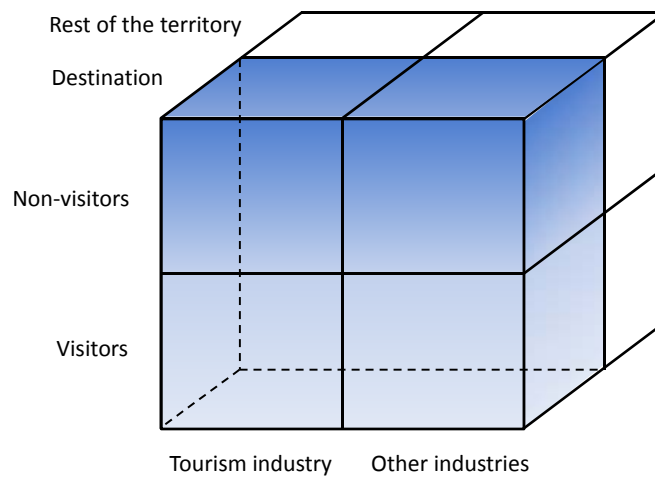
## Destination demand perspective



27



## Integrated destination perspective



28

## Integration of tourism sustainability with global sustainability



= Visitors + non visitors



= Tourism industry + other industries



= Tourism destinations + other places

29

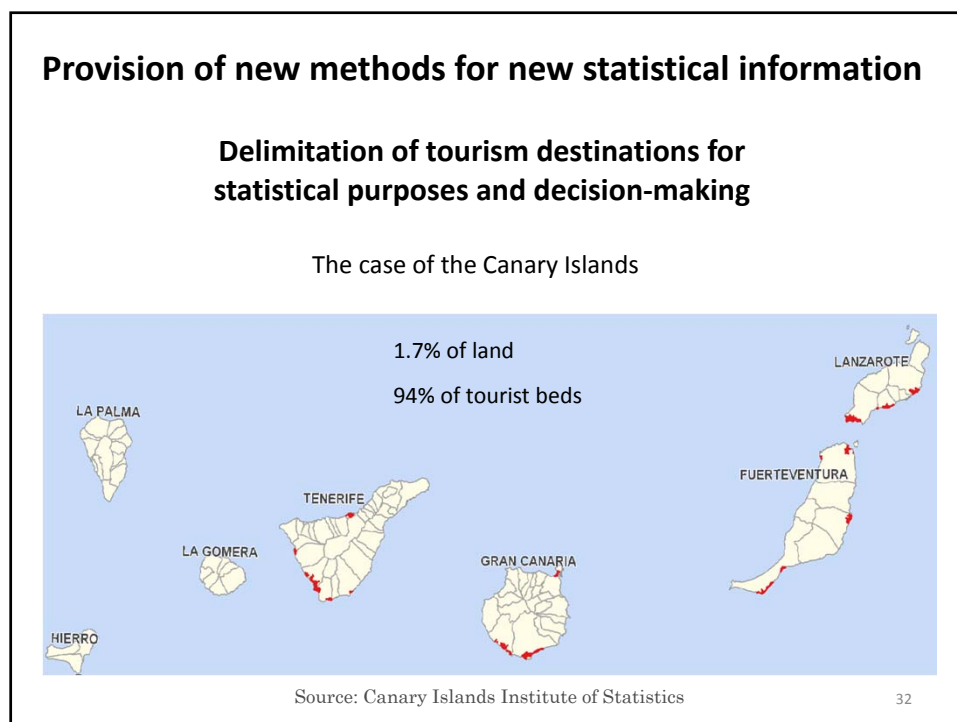
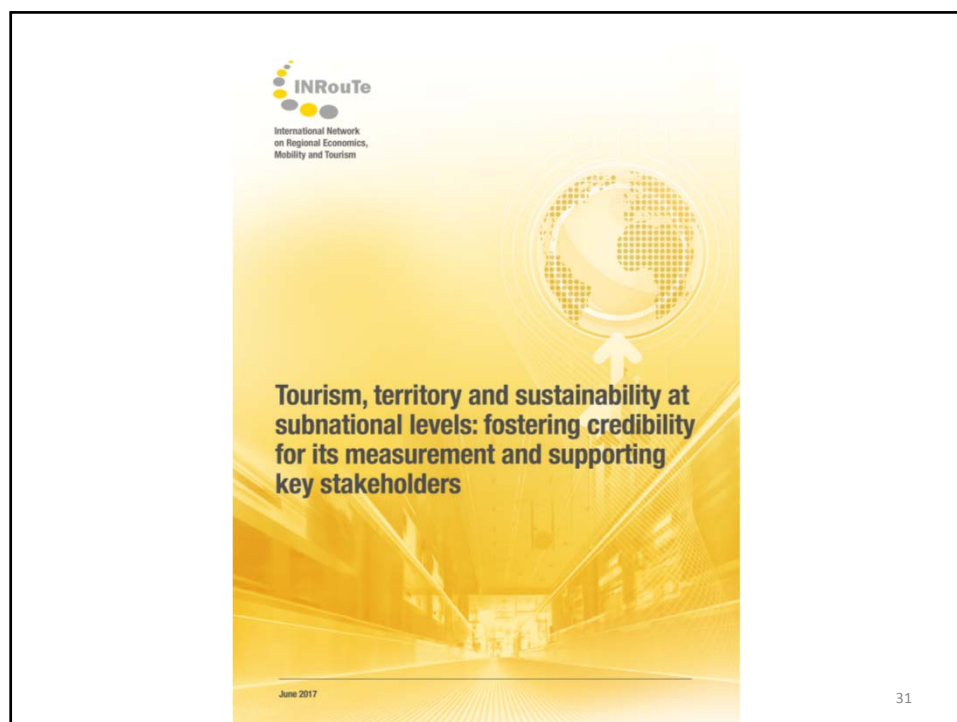
## New concepts, definitions and UNWTO guidelines are needed



**Tourism, territory and sustainability at subnational levels: fostering credibility for its measurement and supporting key stakeholders**



30





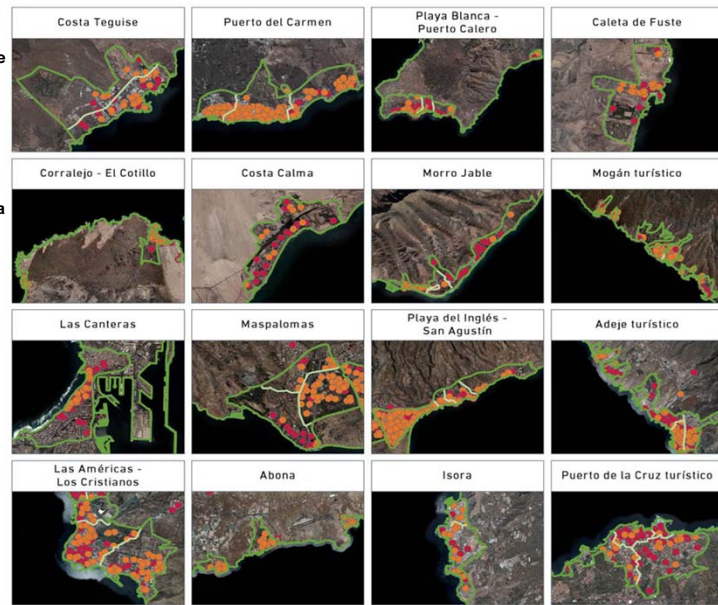
## Canary Islands 16 tourism areas divided into 47 micro-destinations

3 zones in Lanzarote  
(coverage 92% of  
tourist beds)

4 zones in Fuerteventura  
( coverage 93,4% of  
tourist beds)

4 zones in Gran Canaria  
(coverage 96,1 of  
tourist beds)

5 Zones in Tenerife  
( 83,2% coverage  
of tourist beds)

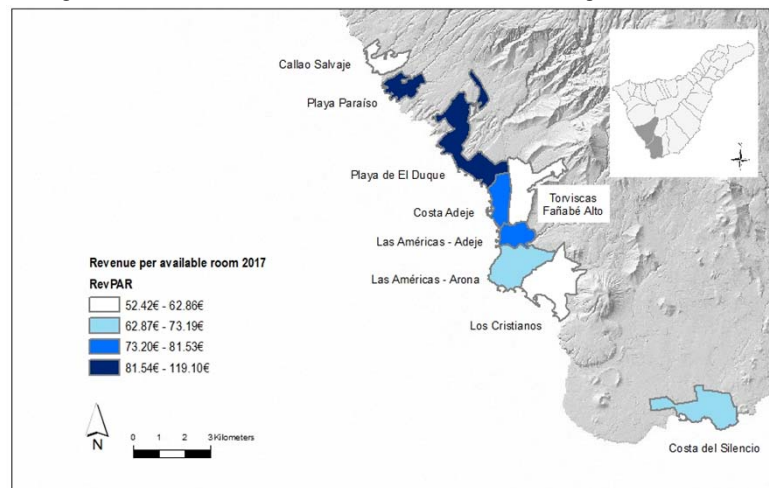


Source: ISTAC

33

## The importance of geolocating tourism information

Revenue per available room in 9 local destinations in 2 municipalities, Tenerife, 2017



Source: Canary Islands Institute of Statistics. Tourist accommodation survey

34

#### Main Criteria for delimiting local tourism destinations

1. Concentration of establishments from tourism industry
2. Homogeneity of tourism typologies and tourism supply
3. Stability of boundaries over time
4. Dynamism and flexibility
5. Feasibility and relevance
6. Public and private support

35

#### Criteria for delimiting micro-destinations

1. Concentration of establishments from tourism characteristic industries
2. Homogeneity of tourism typologies and tourism supply

@catedraturismo

36

### Criteria for delimiting micro-destinations

#### 1. Concentration of establishments from tourism characteristic industries

It allows to separate tourism areas from non-tourism areas

Areas of high tourism density of those of low tourism density

Accommodation - attractions

37

### Criteria for delimiting micro-destinations

#### 1. Concentration of establishments from tourism characteristic industries

#### 2. Homogeneity of tourism typologies and tourism supply

Allows delimiting micro-destinations: a continuous tourism zone may contain one or more micro-destinations

**Homogeneous tourism area**  
(Tourism area = micro-destination)



**Heterogeneous tourism area**  
(Tourism area = several micro-destinations)

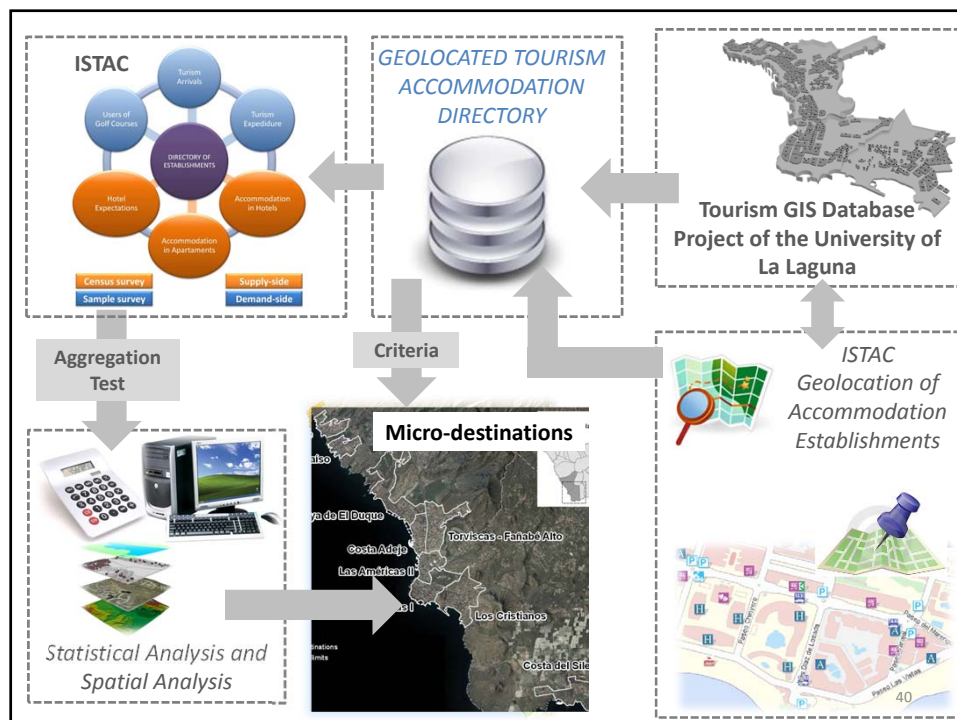


38

### Criteria for delimiting micro-destinations

1. Concentration of establishments from tourism characteristic industries
2. Homogeneity of tourism typologies and tourism supply
3. Stability of boundaries over time
4. Dynamism and flexibility
5. Feasibility and relevance
6. Public and private support

39



## Other relevant indicators for the delimitation of a tourism destination

### Tourism density

- E.g. overnights per square kilometer

### Tourism intensity

- E.g. overnights per local inhabitants

41

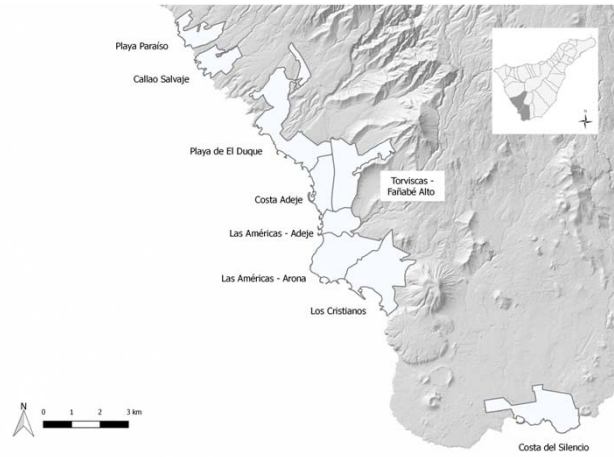
## Adeje and Arona location in the Canary Archipelago



Source: OrtoExpress, GRAFCAN

42

### Adeje and Arona micro-destinations



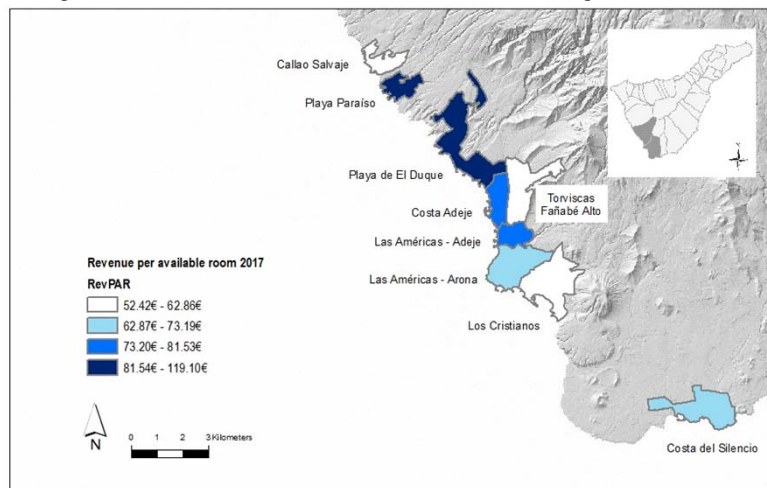
Own elaboration

@catedraturismo

43

### The importance of geolocating tourism information

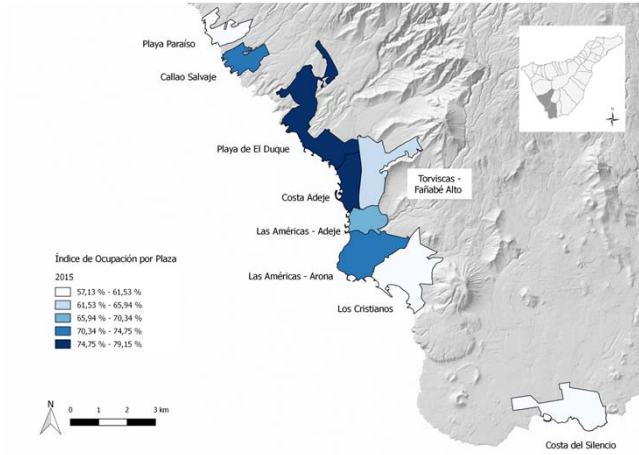
Revenue per available room in 9 local destinations in 2 municipalities, Tenerife, 2017



Source: Canary Islands Institute of Statistics. Tourist accommodation survey

44

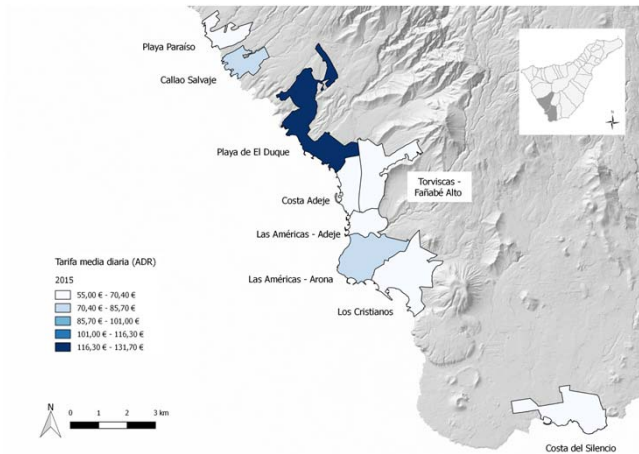
### Occupancy rate by tourism micro-destinations



Source: Tourism Accommodation Survey. ISTAC

45

### Average Daily Rate by tourism micro-destinations



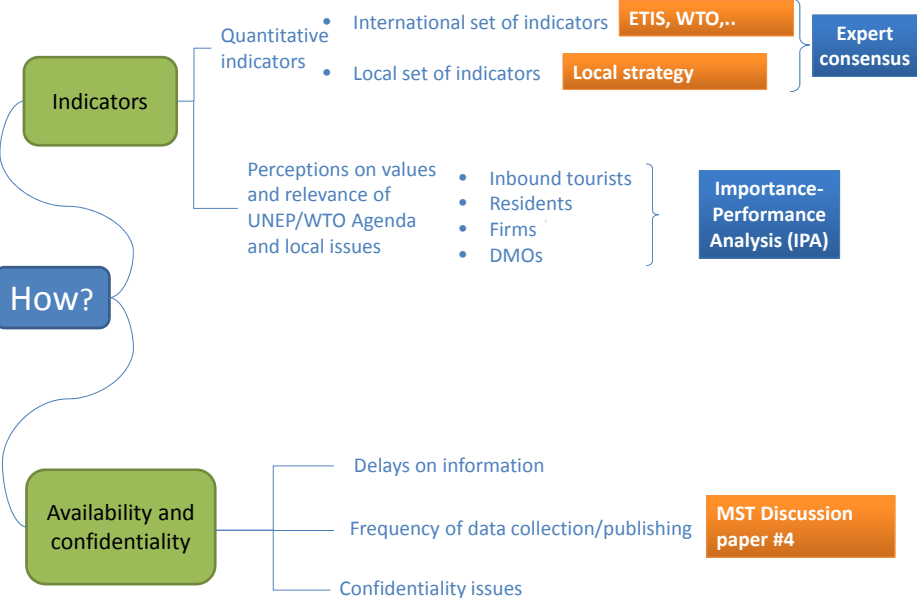
Source: Tourism Accommodation Survey. ISTAC

46

What districts or areas of Berlin are relevant from a tourism point of view?



47



48



## A system of indicators for destination sustainability is needed



- Issues under debate
  - **Sustainability (policy) implications of individual indicators**
  - **Weights, relevance and interrelations** of individual indicators
  - **No clear object of analysis** (tourism industry vs destinations)
  - **Specific** factors of individual destinations
  - Combination of **quantitative indicators** and **stakeholders' perceptions**
  - Effects of **seasonality** on sustainability
  - **Interrelations**, structure or hierarchy of **indicators**
  - **Incomplete perspective** of sustainability
  - **Territorial** scale of analysis
  - Dependence on **quantitative indicators**
  - **Perceptions of different stakeholders**

49

### Tourism sustainability indicators

#### Box 2. Policy themes for sustainable tourism

1. Economic viability	7. Community Wellbeing
2. Local Prosperity	8. Cultural Richness
3. Employment Quality	9. Physical Integrity
4. Social Equity	10. Biological Diversity
5. Visitor Fulfilment	11. Resource Efficiency
6. Local Control	12. Environmental Purity

Source: UNEP/UNWTO 2005, Making Tourism More Sustainable: A Guide for Policy Makers.

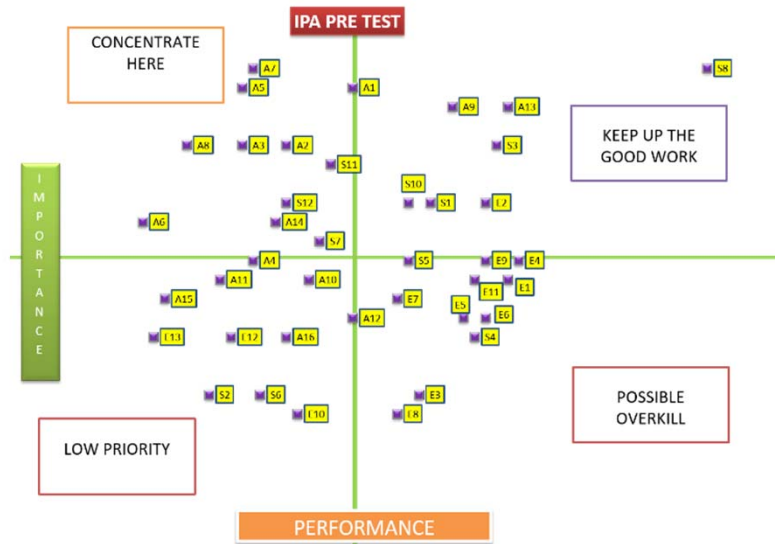
50



### A Dashboard for analysing tourism sustainability

	Global indicators	Local indicators
Quantitative	Set of international indicators based on ETIS, WTO (2004), ...	Set of local specific indicators
Qualitative (IPA)	Perceptions and relevance of 12 policy issues UNEP & WTO (2005)	Perceptions and relevance of local specific issues

## Example of results. Importance - Performance



53

## Example of results. Perception of stakeholders



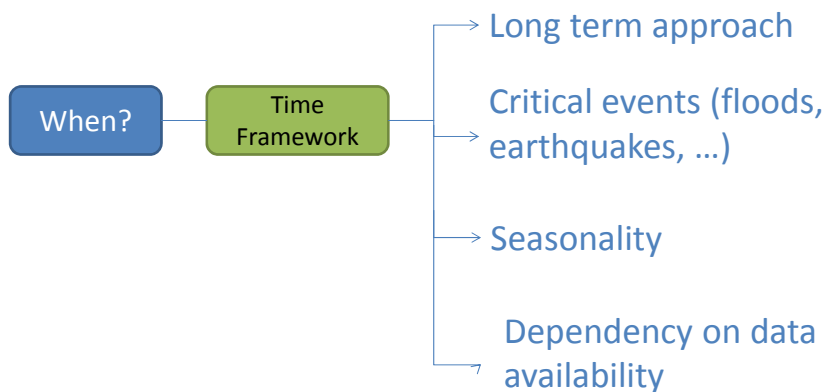
54

## Comparison between destinations, stakeholders,..



55

## The relevance of time



56

## Final remarks

- There is a strong need for **international standards**
- There is a strong need for **case studies**.
- **Linkage to territory** and destination approach
- Obtaining a **comparable** set of quantitative indicators
- A **comparable dashboard of perceptions** on sustainable tourism agenda
- Local **specific** quantitative indicators and perceptions
- Information on the **relevance (weight)** of the items
- **Perceptions** of different **stakeholders**
- Information to design **local sustainable tourism policies**
- **Delimiting boundaries of destinations** is a path for handling local tourism sustainability

57

# Thank you very much!!!

Raúl Hernández-Martín ([rahernan@ull.es](mailto:rahernan@ull.es))  
Head of the Chair in Tourism CajaCanarias-Ashotel  
University of La Laguna

58