



UNWTO Network of Observatories (INSTO)

2017 Global INSTO Meeting

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**CROSTO:
Croatian Sustainable Tourism Observatory**

Zrinka Marušić

Public scientific institute specialized in tourism research - founded in 1959

Research activities

Economic impact and forecasting
Visitor behavior and experiences
Sustainable destination development and governance
Transport, environment and tourism

CROSTO
(from 2016)

Dissemination of research results

Transfer of knowledge to the economy and education

Publishing activities - Journal Tourism

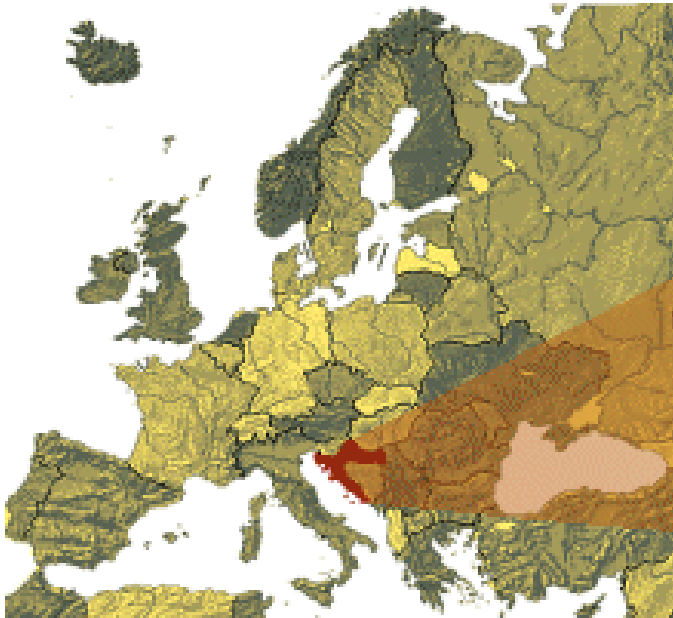
Content and Aim

- CROSTO
- Indicators
- Data sources
- Challenges of the measurement process: national and international scope

Stemming from the first process of measurement of INSTO/CROSTO indicators, we discuss the methodological issues and challenges, and suggest a fine tuning of indicators



CROSTO: Adriatic Croatia



- **NUTS 2 (7 counties)**
- 1.4 million residents
- 6.3 thousand km coastline
- 1,246 islands, islets, rocks
- Pristine environment
- Great variety of landscape
- UNESCO sites
- 4 National and 2 Nature Parks

- Proximity/accessibility to major tourist generating markets
- **13.6 million arrivals** and **74.3 million overnights** in commercial accommodation
- 28% overnights in hotels, 23% in camp sites, 48% in household accommodation
- 88% of overnights in June-September
- Majority of arrivals by car

CROSTO: 14 core indicators

	UNWTO mandatory issue	ETIS section
Percentage of residents who are satisfied with tourism	Local satisfaction with tourism	C Social and cultural impact
Number of tourist nights per 100 residents		
Percentage of tourists who are satisfied with overall experience		
Percentage of repeat/return tourists		A Destination management
Percentage of tourism enterprises using voluntary certification/labelling for environmental CSR		
Number of tourist nights	Destination economic benefits	B Economic value
Daily spending per tourist overnight		
Direct tourism employment as percentage of total employment		
Gross annual occupancy rate in commercial accommodation	Tourism seasonality	
Energy consumption per tourist night compared to general population energy consumption per resident night	Energy management	
Water consumption per tourist night compared to general population water consumption per resident night	Water management	D Environmental impact
Percentage of sewage from a destination treated to at least secondary level prior to discharge	Waste water (sewage) management	
Waste production per tourist night compared to general population waste production per resident night	Solid waste management	
Percentage of destination area out of the settlement's boundaries built for tourist purposes	Governance	

Main data sources

- Central Bureau of Statistics, Croatian Agency for Environmental and Nature Protection, Energy Institute Hrvoje Požar, Ministry of Construction and Physical Planning
- Longitudinal TOMAS Summer Survey on attitudes and expenditures of tourists in Croatia
 - Since 1987, every three to four years (last available results for 2014)
 - Population: Tourists in commercial accommodation in Adriatic Croatia, June - September
 - Sample: Stratified quota sample, 5 to 6 thousand respondents
 - Survey instrument: Questionnaire
 - Data collection method: Personal interview (CAPI)
 - Content: Profile, motives, sources of information, means of transport, length of stay, repeat visits, activities in destination, satisfaction and expenditures
- ✓ *STS in Croatia is enabling sufficient disaggregation and extraction of indicators, but....*

Challenges of the measurement process: national scope

- **Availability** of needed up-to-date information, especially for tourists in different aspects of sharing economy (non-commercial accommodation, VFR, and same-day visitors);
- Secondary data often cannot be used directly, thus often **requiring additional ad-hoc analysis** - time and money consuming;
- Some of the indicators need to be **slightly modified** in their scope and/or estimation process;
- Longitudinal surveys on attitudes and expenditures of tourists in Croatia are always highly **dependent on availability of financial resources**;

Examples:

CROSTO indicator	Percentage of sewage from a destination treated to at least secondary level prior to discharge
Approach	The official data on sewage treated to at least secondary level prior to discharge were corrected by rate of households/dwellings connected to a public sewer system on county level
Data source/s	CBS, First Release 6.1.3. PUBLIC SEWAGE SYSTEM, 2016, additional ad-hoc analysis; CBS, Census of Population, Households and Dwellings 2011, Dwellings by Occupancy Status, 2017
Limitations/issues	The rate of households/dwellings connected to a public sewer system was applied to total waste water (from households and economic activities) at the county level

CROSTO indicator	Direct tourism employment as percentage of total employment
Approach	Estimated based on secondary data available for March and corrected for total employment ratio in March and August, since the August is the peak month of tourist activity
Data source/s	CBS
Limitations/issues	Limited to employment in NKD (2007) section I Accommodation and food service activities only Employees in family housing/households not included in employment statistics; since the importance of household accommodation differs among the counties, it could have a significant impact on employment on a county level



Challenges of the measurement process: international scope/comparability

- **Unified list of core indicators** applied by each of the observatories
- **Fine tuning of indicators** in order to, eventually, redefine the scope of some of the indicators (especially regarding the main tourism demand segments)
- **Region specific, internationally harmonized approach**, dependent on region's development level (i.e. percentage of sewage treated to at least secondary level prior to discharge depends on the rate of households/dwellings connected to a public sewer system)
- Internationally harmonized approach is also highly dependent **on portfolio/structure of tourism products** so an aspect of tourism product in measurement process should be also considered (e.g. gross occupancy rate, tourists loyalty/return visits as well as other indicators that are highly dependent on type of destination tourism product)
- Development of some kind of **aggregate/compound indicator/** based on a specific weighting procedure (at the section level)
- Inauguration of some **baseline values/intervals** in order to enable benchmarking and/or recognition of 'good value practice'



THANK YOU FOR YOUR ATTENTION

Zrinka Marušić, zrinka.marusic@iztg.hr

**Institute for Tourism
Vrhovec 5
10 000 Zagreb
CROATIA**

www.iztg.hr