

# Introduction to the Methodological Model for Monitoring the Sustainable Development of Coastal and Maritime Tourism

- **Purpose:** introduction to the logic, structure and purpose of the methodological model for the observatory of coastal and maritime tourism in the Mediterranean.
- **Objective:** understanding the transformation of the theoretical framework of sustainability into a practical measurement and policy support system.
- **Methodology:** analysis of the structure of the standard, monitoring indicators and the role of the observatory in decision-making.



Unit 3:

Social & Cultural Indicators

Environmental Indicators

Governance Indicators



# Social & Cultural Dimension – Monitoring Subtopics

The social and cultural dimension examines how tourism development affects the daily lives of residents, social cohesion, cultural identity and the visitor experience.



COASTAL  
TOURISM

## Social acceptance and quality of life

It evaluates the way in which tourism affects the daily life and the quality of life of the inhabitants.

Examples: Resident satisfaction, tourist pressure.

## Cultural heritage and local identity

It examines the contribution of tourism to the protection and promotion of cultural heritage.

Examples: Cultural venues, local events.

## Accessibility and social inclusion

It evaluates equal access to tourism infrastructure and services.

Examples: Accessibility of tourism businesses for people with disabilities.

## Education and training of human resources

Monitors skill development and continuous training of employees.

Examples: Training programs, certifications, participation in trainings.

## Safety and public health

It assesses the adequacy of infrastructure and services to protect residents and visitors.

Examples: Lifeguard cover.

SEA  
TOURISM

The sub-themes are common for Coastal and Maritime Tourism. The differences are mainly found in the individual indicators and in the data sources used for each form of tourism (e.g. Subthematic: Safety and public health, in maritime tourism the indicators are specialized in port and marina security, management of emergencies on boats and passengers).

# From the Superset to the Core of Social & Cultural Indicators

From an initial set of 43 social and cultural indicators, 7 indicators were selected that can directly support the monitoring of the social impact of tourism, employment equity and the relationship between tourism and cultural heritage.

This option creates a realistic operating basis for the Observatory, with the possibility of gradually integrating new indicators.

## 1. Indicators with limited data availability

- Social cohesion
- Participation of residents in decision-making
- Accessibility of tourist services
- Employee training and skills
- Public health and safety indicators

## 2. Indicators that require primary research

- Residents' satisfaction with tourism development
- Business perception of the impacts of tourism
- Guest perception of quality of experience

## 3. Indicators that will mature in the course of the Observatory's operation

- Local community participation in tourism
- Social impacts of short-term rentals
- Indicators of quality of life of residents



### Η ΚΟΙΝΩΝΙΚΗ & ΠΟΛΙΤΙΣΤΙΚΗ ΔΙΑΣΤΑΣΗ. ΣΤΟΝ ΤΟΥΡΙΣΜΟ



**Κοινωνική συνοχή**

Ενίσχυση της ποιότητας ζωής και της κοινωνικής ευημερίας των κατοίκων



**Συμμετοχή και αποδοχή**

Ενεργή συμμετοχή κατοίκων και επιχειρήσεων στον τουριστικό σχεδιασμό



**Ισότητα και ένταξη**

Δίκαιες ευκαιρίες και ισότιμη συμμετοχή όλων στην τουριστική ανάπτυξη



**Πολιτιστική κληρονομιά**

Προστασία και ανάδειξη της πολιτιστικής ταυτότητας και κληρονομιάς



**Εκπαίδευση & δεξιότητες**

Ανάπτυξη γνώσεων και δεξιοτήτων του ανθρώπινου δυναμικού



**Ασφάλεια & υγεία**

Διασφάλιση υγείας και ασφάλειας για κατοίκους και επισκέπτες



**Στόχος:** Ένας τουρισμός που δημιουργεί αξία για τους ανθρώπους, σέβεται τον πολιτισμό και ενισχύει την ποιότητα ζωής του προορισμού.

# Tourist Pressure Indicator

**$(\text{Number of arrivals} + \text{seasonally employed}) / \text{permanent residents} \times 100$**

*The possibility of splitting the indicator into two sub-indicators (visitor arrivals and seasonal workers) was considered, however this approach was not selected. Seasonal workers are a direct consequence of tourism demand and show a strong correlation with visitor arrivals. Therefore, creating two distinct indicators would lead to information redundancy. A composite indicator that captures additional population pressure exerted on the destination was therefore preferred instead of several individual indicators measuring different aspects of the same phenomenon.*



## BASIC QUESTIONS

- How intense is the tourist activity in relation to the size of the local community?
- How does tourist intensity evolve over time?



## INTERPRETATION OF INDICATORS

- High prices: increased tourist intensity
- Low prices: less pressure on the local community



## STRATEGIC USE

- Destination benchmarking.
- Locating areas with increased pressures.
- Support visitor management policies.



## SOURCES & METHODOLOGY

Data source: ELSTAT, ERGANI

Required data: Visitor arrivals, seasonally employed, permanent population.

Minimum possible periodicity: Monthly

Spatial level: Municipality / LAU.



## LIMITATIONS & CAUTION

- The indicator measures the intensity of the tourist presence in relation to the permanent population, without directly capturing the effects on the daily life of the residents.
- High prices are an indication of increased tourist pressure and should be evaluated in conjunction with indicators of infrastructure and environment and social acceptance.

The indicator shows how large the tourist presence is in relation to the size of the local community.



# Cruise Tourist Pressure

*Cruise guests per 100 inhabitants*



## BASIC QUESTIONS

- How important is the cruise's presence at the destination?
- Which ports receive the largest number of visitors relative to their population?



## INTERPRETATION OF INDICATORS

- High prices: Strong concentration of cruise guests.
- Low prices: Limited influence of the cruise on the day-to-day operation of the destination.



## STRATEGIC USE

- Identification of areas with increased tourist pressure.
- Monitoring the progress of the activity.
- Support management measures.



## SOURCES & METHODOLOGY

Data source: Ports Organizations, ELSTAT

Required data: Cruise passengers, resident population.

Minimum possible periodicity: Monthly

Spatial level: Port



## LIMITATIONS & CAUTION

The indicator captures the intensity of pressure but not the economic contribution of the cruise to the destination.

Key indicator for assessing the tourist pressure exerted by the cruise on coastal destinations.



# Indicator of Women in Coastal Tourism Employment

*Women employed in coastal (marine) tourism / Total employed × 100*



## BASIC QUESTIONS

- What is the participation of women in the tourism labor market?
- Are there differences between destinations?



## INTERPRETATION OF INDICATORS

- High values: higher participation of women in employment.
- Low rates: may indicate imbalances in the labor market.



## STRATEGIC USE

- Monitoring gender equality.
- Social impact assessment of tourism.
- Comparison between destinations.



## SOURCES & METHODOLOGY

Data source: ERGANI

Required data: Employees by gender, KAD tourism.

Minimum possible periodicity: Monthly

Spatial level: Municipality / LAU.



## LIMITATIONS & CAUTION

- The indicator captures participation, not position, earnings or quality of employment.
- It does not capture potential disparities between different occupational categories.

The indicator shows the degree of participation of women in the tourism economy of the destination.



# Age Structure Indicator

*Percentage of employed persons by age group in the tourist KAD*



## BASIC QUESTIONS

- Does tourism attract new workers?
- How is the age composition of the workforce changing?
- Are there signs of aging employment in tourism?



## INTERPRETATION OF INDICATORS

- High participation of younger ages: Potential to renew and attract human resources.
- High participation of older ages: Potential needs for reskilling and staff succession.



## STRATEGIC USE

- Monitoring demographic trends in employment.
- Assessment of industry attractiveness.
- Designing training and skills development policies.



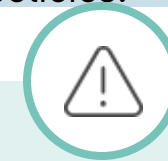
## SOURCES & METHODOLOGY

Data source: ERGANI

Required data: Employees by age group in the tourist KAD.

Minimum possible periodicity: Annually

Spatial level: Municipality / LAU.



- The indicator is based on an assessment of the contribution of KAD to tourism employment
- The indicator is based on reported employment and may not accurately reflect the age structure
- The indicator captures the demographic composition of the workforce, not the skill level.

The indicator helps to understand the age composition and future sustainability of the tourism workforce.

# Indicator of Visits to Cultural Sites

*Number of visits to cultural sites / Total visitors × 100*



## BASIC QUESTIONS

- Is culture a key element of the tourist experience?
- How do destinations differ in terms of cultural appeal?



## INTERPRETATION OF INDICATORS

- High prices: strong link between tourism and culture.
- Low prices: limited exploitation of cultural resources.



## STRATEGIC USE

- Assessing cultural appeal.
- Planning cultural routes.
- Monitoring cultural tourism.



## SOURCES & METHODOLOGY

Data source: Ministry of Foreign Affairs, management bodies.  
Required data: Visits to cultural sites, total number of visitors.  
Minimum possible periodicity: Annually  
Spatial level: Municipality / LAU.



## LIMITATIONS & CAUTION

- The indicator captures the link between tourism and organized cultural resources, without covering the entire cultural activity of a destination.
- Its interpretation is influenced by the availability and size of the cultural infrastructure of each destination.

The indicator shows how important a role culture plays in the tourist experience of the destination.

# Environmental Dimension: Monitoring Subthemes

In coastal tourism, the state of ecosystems and biodiversity is monitored separately, while in maritime tourism the emphasis is mainly on environmental pressures and the management of the impacts of tourism activities at sea.



COASTAL  
TOURISM

## Natural resource management

It assesses the consumption and efficient use of natural resources affected by tourism activity.

Examples: Water consumption, energy consumption, RES use.

## Waste and pollution management

Monitors environmental pressures resulting from waste generation and pollution.

Examples: Municipal waste, recycling, sewage management.

## Ecosystems and biodiversity

It assesses the status and protection of natural ecosystems and biodiversity.

Examples: Natura 2000 protected areas, coastal habitats.

## Environmental responsibility of businesses and visitors

It examines the degree to which sustainable practices are implemented by businesses and visitors.

Examples: Environmental certifications, environmental awareness.

SEA  
TOURISM

## Natural resource management

It assesses the use of natural resources in maritime tourism activities.

Examples: Water and energy consumption in tourist ports and port facilities.

## Waste and pollution management

Monitors pressures arising from pleasure craft, cruising and port activities.

Examples: Ship waste, sewage, marine litter.

## Environmental responsibility of businesses and visitors

It evaluates the application of sustainable management practices in maritime tourism.

Examples: Environmental certifications of marinas.

# From the Superset to the Core of Environmental Indicators

From an initial set of 54 environmental indicators, 9 indicators that can directly support the operation of the Observatory were selected based on data availability, possibility of regular updating and comparability between destinations.

The selection of does not discard the remaining indicators; it creates the basis for the gradual incorporation of more complex indicators as data collection mechanisms mature.



## ΝΕΡΟ

Ορθολογική χρήση και προστασία υδατικών πόρων



## ΕΝΕΡΓΕΙΑ

Μείωση κατανάλωσης και στροφή σε καθαρές πηγές



## ΑΠΟΒΛΗΤΑ & ΡΥΠΑΝΣΗ

Μείωση, ανακύκλωση και σωστή διαχείριση ρύπων



## ΟΙΚΟΣΥΣΤΗΜΑΤΑ & ΒΙΟΠΟΙΚΙΛΟΤΗΤΑ

Προστασία φυσικού περιβάλλοντος και βιοποικιλότητας



## ΚΛΙΜΑΤΙΚΗ ΑΛΛΑΓΗ & ΚΙΝΔΥΝΟΙ

Προσαρμογή και ανθεκτικότητα προορισμών

## ΠΕΡΙΒΑΛΛΟΝΤΙΚΟΙ ΔΕΙΚΤΕΣ

Προστασία – Διαχείριση – Ανθεκτικότητα

### 1. Indicators with limited data availability

- Water/energy consumption from tourism activities
- Waste produced per tourist
- Water, air and coastal pollution
- Green business certifications

### 2. Indicators that require primary research or that will mature in the course of the Observatory's operation

- Loads of beachgoers
- Environmental awareness of visitors
- Business information campaigns
- Marine waste and ship sewage
- Cruise ship pollutants
- Resource consumption in tourist ports and cruise
- Coastal erosion



# Waste Management Indicator

*Total amount of waste recycled / Total amount of municipal waste produced × 100*



## BASIC QUESTIONS

- How effectively does the destination manage the waste generated?
- Does recycling increase over time?



## INTERPRETATION OF INDICATORS

- High prices: efficient waste management systems.
- Low prices: limited waste recycling.



## STRATEGIC USE

- Evaluation of recycling actions.
- Compare destinations.
- Support circular economy policies.



## SOURCES & METHODOLOGY

Data source: DEYA, Municipalities, Ministry of Finance  
Required data: Generated waste and recycled waste.  
Minimum possible periodicity: Annually  
Spatial level: Municipality / LAU.



## LIMITATIONS & CAUTION

- Data availability varies between destinations.
- Logging methodologies may vary between carriers.

The indicator shows how effectively the destination converts waste into resources through recycling.



# Indicator of Protected Areas

*Area of protected areas / Total area of destination*



## BASIC QUESTIONS

- How much of the destination is institutionally protected?
- Are there increased environmental management requirements?



## INTERPRETATION OF INDICATORS

- High values: high degree of interaction of tourism with sensitive ecosystems
- Low values: limited presence of protected ecosystems.



## STRATEGIC USE

- Spatial planning support.
- Prioritization of protection actions.
- Assessment of environmental pressures.



## SOURCES & METHODOLOGY

Data source: OFYPEKA, MINISTRY OF  
Required data: Natura 2000, total destination area.  
Minimum possible periodicity: Annually  
Spatial level: Municipality / LAU.



## LIMITATIONS & CAUTION

- The indicator does not capture the conservation and protection effectiveness of protected destinations.
- It only counts institutionally protected lands.

The indicator shows the degree of interaction of tourism with ecologically sensitive areas that require special management and protection.



# Blue Flag Indicator

***Blue Flag Beaches / Total Beaches × 100***



## BASIC QUESTIONS

- What is the environmental quality of the coasts?
- Is the destination performing better?



## INTERPRETATION OF INDICATORS

- High prices: high environmental standards.
- Low values: indicate room for improvement.



## STRATEGIC USE

- Destination benchmarking.
- Environmental quality monitoring.
- Target view support.



## SOURCES & METHODOLOGY

Data source: EEPF

Required data: Awarded coasts, total coasts.

Minimum possible periodicity: Annually

Spatial level: Municipality / LAU.



## LIMITATIONS & CAUTION

- The indicator assesses compliance with the program criteria and not the total environmental performance of the destination.
- The absence of an award does not necessarily imply a low quality coast, as participation in the scheme is optional.

The indicator captures the level of environmental quality and coastal management of a destination.



# Indicator of Preventive Vegetation Clearing

*Area cleared / Total area to be cleared × 100*



## BASIC QUESTIONS

- Are fire prevention actions implemented?
- Is destination readiness improving?



## INTERPRETATION OF INDICATORS

- High values: indicate increased prevention.
- Low values: indicate increased environmental risk.



## STRATEGIC USE

- Monitoring of prevention measures.
- Destination Resilience Assessment.
- Support civil protection policies.



## SOURCES & METHODOLOGY

Data source: Municipalities, Ministry of Internal Affairs

Required data: Cleared area, total cleared area to be cleared

Minimum possible periodicity: Annually

Spatial level: Municipality / LAU.



## LIMITATIONS & CAUTION

- Areas considered eligible for preventive cleaning may vary between destinations affecting the comparability of results.
- High values do not necessarily imply low fire risk, as risk is also influenced by climatic, geomorphological and operational factors.

The indicator shows the destination's degree of preparation for fire prevention and natural ecosystem protection.



# Cleared Stormwater Wells Indicator

*Cleaned wells / Total wells × 100*



## BASIC QUESTIONS

- Is stormwater infrastructure maintained?
- Is there adequate flood prevention?



## INTERPRETATION OF INDICATORS

- High values: indicate increased readiness.
- Low values: indicate potential flood risks.



## STRATEGIC USE

- Infrastructure Resilience Monitoring.
- Design of civil protection projects.



## SOURCES & METHODOLOGY

Data source: Municipalities, Ministry of Internal Affairs  
 Required data: Cleaned wells, total wells  
 Minimum possible periodicity: Annually  
 Spatial level: Municipality / LAU.



## LIMITATIONS & CAUTION

- The indicator measures the extent of maintenance work and not the effectiveness of the overall stormwater system.
- The flood risk also depends on factors that are not captured in the indicator, such as the intensity of rainfall.

The indicator reflects the preparedness of the destination against flood risks and extreme weather events.



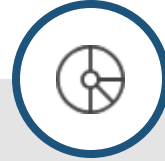
# Percentage of businesses with recognized environmental certifications

*Spatial planning maturity stage (None → Under development → Approved → In implementation)*



## BASIC QUESTIONS

- To what extent do tourism businesses adopt recognized environmental management standards?
- How widespread are environmental certifications in the destination?



## INTERPRETATION OF INDICATORS

- High prices: stronger environmental responsibility of tourism businesses.
- Low rates: limited implementation of certified environmental management practices.



## STRATEGIC USE

- Support policies promoting green certifications and sustainable tourism.
- Benchmarking environmental performance between destinations.



## SOURCES & METHODOLOGY

Data source: Ministry of Environment and Energy / competent certification body

Required data: Number of tourism businesses with recognized environmental certifications and total number of tourism businesses.

Minimum possible periodicity: Annually

Spatial level: Municipality / LAU



## LIMITATIONS & CAUTION

- The indicator captures the adoption of recognized environmental certifications and not the overall level of environmental performance of businesses.
- The availability and completeness of the data depends on the registers available.

The indicator captures the degree of adoption of recognized environmental certifications by tourism businesses and is an indication of the destination's environmental responsibility.

# Governance: Monitoring Subtopics

The governance dimension examines how sustainable tourism development is planned, coordinated and monitored, as well as the degree of cooperation between the actors involved.



## **Institutional and strategic framework**

It assesses the existence of policies, strategic plans and monitoring mechanisms that support the sustainable development of tourism.

Examples: Sustainable tourism strategy, spatial planning and land uses, implementation of sustainable development policies



## **Participation, communication, visibility and collaborations**

It looks at the participation of stakeholders, information and awareness of visitors and businesses, as well as the promotion of the destination as a sustainable tourism destination.

Examples: Engaging stakeholders in consultations, informing visitors about sustainability actions

The sub-themes are common for Coastal and Maritime Tourism. The differences are found mainly in the agencies involved and the data sources used.

- Coastal Tourism: Municipalities, Regions, destination management agencies, tourism businesses.
- Maritime Tourism: Port authorities, tourist ports, cruise operators, managers of maritime activities.

# ΔΙΑΚΥΒΕΡΝΗΣΗ

Δείκτες για τη θεσμική ικανότητα και τη βιώσιμη ανάπτυξη του τουρισμού



## ΘΕΣΜΙΚΟΣ ΣΧΕΔΙΑΣΜΟΣ

Υπαρξη εγκεκριμένης στρατηγικής βιώσιμου τουρισμού



## ΧΩΡΙΚΟΣ ΣΧΕΔΙΑΣΜΟΣ

Υπαρξη χωρικών σχεδίων και εφαρμογή χρήσεων γης



## ΠΕΡΙΒΑΛΛΟΝΤΙΚΗ ΔΙΑΧΕΙΡΙΣΗ

Ποσοστό επάρκειας εγκαταστάσεων παραλαβής αποβλήτων (θαλάσσιος τουρισμός)



## ΣΥΜΜΕΤΟΧΗ & ΣΥΝΕΡΓΑΣΙΕΣ

Ικανοποίηση συμμετοχής ενδιαφερόμενων μερών σε διαβουλεύσεις



## ΕΠΙΚΟΙΝΩΝΙΑ ΒΙΩΣΙΜΟΤΗΤΑΣ

Επιχειρήσεις που επικοινωνούν δράσεις βιωσιμότητας και αναγνωρισιμότητα προορισμού ως βιώσιμου

### CORE INDICATORS

- ✓ Στρατηγική βιώσιμου τουρισμού
- ✓ Χωρικά σχέδια
- ✓ Χρήσεις γης
- ✓ Επάρκεια εγκαταστάσεων παραλαβής αποβλήτων

### FUTURE INDICATORS

- ✓ Συμμετοχή ενδιαφερόμενων μερών
- ✓ Επιχειρήσεις που επικοινωνούν δράσεις βιωσιμότητας
- ✓ Αναγνωρισιμότητα βιώσιμου προορισμού



**ΣΤΟΧΟΣ:** Ισχυρό θεσμικό πλαίσιο, αποτελεσματικός σχεδιασμός και τεκμηριωμένη λήψη αποφάσεων για τη βιώσιμη ανάπτυξη του τουρισμού.

# From the Superset to the Core of Governance Indicators

From a wider set of governance indicators, the indicator that captures the existence of basic planning, management and support tools for sustainable tourism development was selected. The indicator assesses the degree of institutional maturity of destinations and their ability to plan, implement and monitor sustainable tourism policies.

## 1. Indicators with limited data availability

- Satisfaction of stakeholder participation in consultations
- Level of visitor information on sustainable tourism actions
- Recognizability of destination as sustainable

## 2. Indicators that require primary research or that will mature in the course of the Observatory's operation

- Businesses communicating sustainability actions
- Stakeholder participation in governance
- Actions to inform and raise awareness among visitors
- Indicators of public and private sector cooperation

# Indicator of the Existence of Strategy for Sustainable Tourism

*Maturity stage of sustainable tourism strategy (None → Under development → Approved)*



## BASIC QUESTIONS

- Does the destination have a formal strategy for sustainable tourism development?
- Is there a mechanism for tracking goals?



## INTERPRETATION OF INDICATORS

- High values: stronger institutional readiness for tourism planning and management.
- Low values: lower degree of readiness



## STRATEGIC USE

- Monitoring the progress of implementing sustainable tourism policies.
- Identification of technical support needs or strengthening of administrative capacity.



## SOURCES & METHODOLOGY

Data source: Municipalities, Regions, Ministry of Internal Affairs

Required data: Existence of strategy, stage of maturity

Minimum possible periodicity: Annually

Spatial level: Municipality / Region



## LIMITATIONS & CAUTION

- Having an approved strategy does not in itself ensure its effective implementation.
- The indicator assesses the institutional framework and not the actual results of the policies implemented.

The indicator captures the degree of institutional readiness of a destination to design and implement sustainable tourism policies.