

CO-EVOLVE

Promoting the co-evolution of human activities
and natural systems for the development of
sustainable coastal and maritime tourism

Deliverable 3.16.2

Tourism Sustainability Toolkit

Activity 3.16

Tourism Sustainability at local scale through
Sustainability Index - System implementation

WP3

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1. *Introduction*

Tourism constitutes a complex matter in international research and receives different definitions depending on the focus of each study. Statistical identification is often difficult since tourism is not clearly defined as an industrial sector. In addition to its economic aspects, tourism involves spatial, environmental, social, cultural and political dimensions. Even the very act of travelling needs to be defined in terms of distance travelled, length of stay and crossing country borders or not. Another issue involves the purpose of the visit (leisure, business etc.) and tourists' identity (ESPON, 2006).

The concept of sustainable tourism destinations and sustainable development has majorly altered the way of understanding and estimating the tourism impact and performance, by integrating key factors and dimensions previously ignored. The economic and social performance of the tourism activities need to be correlated and co-evaluated with the environmental performance and impacts on tourism destinations in a long term perspective to ensure the conditions of development for future generations (Spilanis I. et al, 2009).

This activity builds upon the typology of tourism destinations developed under 3.16.1. as well as the existing efforts of measuring tourism sustainability in order to create a system of indicators which will assess sustainability in terms of criteria corresponding to the four dimensions of sustainability: environment, society, economy and governance.

2. Measuring and monitoring sustainability of tourism destinations in the Mediterranean

2.1. Review of existing sustainable tourism indicators

Various organizations have developed several indicators for measuring the sustainability of destinations regarding tourism activities. Both the World Tourism Organization and the European Commission have developed toolkits and guidelines in this concept.

World Tourism Organization presents a wide scope of issues and indicators – although it distinguishes a baseline context and baseline indicators - in the following thematic sectors (WTO, 2004):

1. Well-being of host communities
2. Sustaining Cultural Assets
3. Community Participation in Tourism
4. Tourist Satisfaction
5. Health and Safety
6. Capturing Economic Benefits from Tourism
7. Protection of Valuable Natural Assets
8. Managing Scarce Natural Resources
9. Limiting Impacts of Tourism Activity
10. Controlling Tourist Activities and Level
11. Destination Planning and Control
12. Designing Products and Services
13. Sustainability of Tourism Operations and Services

The destination applications of the indicators by WTO are of particular interest, since the need for more specialized measurements according to the destination's type is acknowledged. The main concept is to approach the development process by using indicators to describe the characteristics important to destinations according to their typology. WTO has also proceeded to several applications of the sustainable indicators system including the Mediterranean coastal area.

Table 1: Application of key indicators of sustainability in the Balearic Islands

Section	Key indicators
Demographic Indicators	<ul style="list-style-type: none"> • Human Pressure Index • Tourist Pressure Index (tourist seasonality) • Accommodation Capacity
Socio-Economic Indicators	<ul style="list-style-type: none"> • Job stability • Beaches: number of visitors and tourist saturation • Housing access • Wages evolution • Number of Vehicles in Use
Environmental Indicators	<ul style="list-style-type: none"> • Urban water consumption • Natural Protected areas • CO2 Emissions • Waste recycling

WTO, 2004

The OECD approach is to create a limited set of meaningful and robust indicators useful for governments to evaluate and measure tourism competitiveness in their country over time and to guide them in their policy choices. The OECD work builds on relevant outputs from the OECD (e.g. Towards Green Growth: Monitoring Progress; Framework for the Evaluation of Tourism Policies and Programmes; Compendium of OECD Well-Being Indicators), as well as on member and partner countries and industry practices in measuring competitiveness (Dupeyras and MacCallum, 2013).

The principles applied in drawing up a set of indicators are:

- A balanced coverage of the main elements of competitiveness in tourism with particular attention given to indicators of significance for advanced economies with a mature tourism sector.
- The identification of key issues for which indicators are needed, i.e. those that are of common relevance to the analysis of competitiveness in tourism in member and partner countries.
- The use of a conceptual framework that reflects the integrated nature of competitiveness in tourism while organizing the indicators in a way useful to decision makers.
- The careful selection of indicators that best reflect major trends related to these issues. For each indicator proposed, there is a discussion about practicalities: its policy relevance, its measurability, and the data comparability (Dupeyras and MacCallum, 2013).

The indicators are organized around four categories:

- Indicators measuring the tourism performance and impacts: Increasing the economic value of tourism is an important concern for advanced tourism economies to remain competitive in the global tourism market place and vis-à-

vis other industries. The objective to augment the value of tourism requires an increased collaboration across the tourism value chain which could help the tourism sector at large to overcome its high fragmentation, to deliver a total tourism experience and to support a better use of existing infrastructure, staff and resources. An indirect measurement of these issues could be provided by traditional tourism indicators assessing change and trends in jobs, income and revenues.

- Indicators monitoring the ability of a destination to deliver quality and competitive tourism services: A natural starting point for measuring the tourism competitiveness of a destination is the production side and the business environment. A direct source of competitiveness for a destination is a dynamic and fair business environment. This group of indicators therefore relates to the supply side of the tourism economy.
- Indicators monitoring the attractiveness of a destination: The attractiveness of a destination is a broad concept that is closely interconnected with the notion of competitiveness and with the quality of the tourism experience. To be competitive in the global tourism market place, a destination has to maintain and develop its attractiveness and distinctiveness. The tourism experience is about connecting people and visitors to what represents the identity of a destination, notably its natural and cultural resources and its way of life. To monitor the competitiveness of a destination, it is therefore appropriate to introduce a group of indicators dealing with the notion of attractiveness.
- Indicators describing policy responses and economic opportunities: Incentives to become more competitive and more attractive are provided by a dynamic institutional framework able to foster well-designed support policies in areas that impinge on competitive and sustainable tourism environment. Many policies play an instrumental role in tourism development. In advanced economies, new forces are needed to support growth and create new value by designing innovative tourism services (Dupeyras and MacCallum, 2013).

The European Tourism Indicator System (ETIS) identifies 43 core indicators addressing the key issues for sustainability: economy, society and environment. The core indicators capture the baseline information to understand, monitor and manage the performance and impact of tourism activities on a destination, providing comparison over time and a basis for sustainable destination management. Also, a list of supplementary indicators is suggested for further specialization on the destinations' special needs, covering issues such as cultural routes and accessible tourism (European Union, 2016).

Table 2: Categories of core indicators of sustainable development

Section	Indicator Thematic Category
A. Destination management	A.1 Sustainable tourism public policy A.2 Customer satisfaction
B: Economic value	B.1 Tourism flow (volume and value) at destination B.2 Tourism enterprise(s) performance B.3 Quantity and quality of employment B.4 Tourism supply chain
C: Social and cultural impact	C.1 Community/social impact C.2 Health and safety C.3 Gender equality C.4 Inclusion/accessibility C.5 Protecting and enhancing cultural heritage, local identity and assets
D: Environmental impact	D.1 Reducing transport impact D.2 Climate change D.3 Solid waste management D.4 Sewage treatment D.5 Water management D.6 Energy usage D.7 Landscape and biodiversity protection

European Union, 2016

Table 3: ETIS supplementary indicators

Section	Indicator Thematic Category
Maritime and coastal tourism	<ul style="list-style-type: none"> • Passengers and ports • Water quality • Beaches
Accessible tourism	<ul style="list-style-type: none"> • Sustainable tourism policy • Equality/accessibility • Reducing transport impact
Transnational cultural routes	<ul style="list-style-type: none"> • Destination management survey • Enterprise survey • Resident survey

European Union, 2016

For the purposes of this system of indicators, a destination can be defined as:

- a geographic area that is currently or potentially attractive to visitors/tourists;
- a place or area which is recognised and can easily be defined as a visitor destination and has a range of facilities and products in place for tourism purposes;
- a place or area which is promoted as a destination;
- a place or area where it is possible to measure the supply of and demand for tourism services, i.e. the visitor economy;
- a place or area where the visitor management process usually includes a range of public and private-sector stakeholders together with the host community.

2.2. CO-EVOLVE approach in developing a sustainability indicators toolkit for the Mediterranean

In the context of CO-EVOLVE, indicators are categorized into **three** distinctive types following international practices. The first refers to a set of core indicators that will be the common basis for comparison of the level and trends of sustainable development for all types of destinations. Examining the European Tourism Indicator System (ETIS), 40 **core indicators** have been selected - as more relevant to sustainable coastal tourism and the CO-evolve concept - to address the key issues for tourism sustainability in coastal areas: economy, society and environment.

Table 4: ETIS Core indicators and key issues addressed (C)

Section A: Destination management		
Criteria	Indicator reference	ETIS core indicators
C.A1 Sustainable tourism public policy	C.A1.1.	% of tourism enterprises/establishments in the destination using a voluntary certification/labelling for environmental /quality/sustainability and/or Corporate Social Responsibility
C.A2 Customer satisfaction	C.A2.1.	% of tourists and same-day visitors that are satisfied with their overall experience in the destination
	C.A2.2.	% of repeat/return visitors (within 5 years)
Section B: Economic value Criteria Indicator		
Criteria	Indicator reference	ETIS core indicators
C.B1 Tourism flow (volume and value) at destination	C.B1.1.	Number of tourist nights per month
	C.B1.2.	Number of same-day visitors per month
	C.B1.3.	Relative contribution of tourism to the destination's economy (% GDP)
	C.B1.4.	Daily spending per overnight tourist(€)
	C.B1.5.	Daily spending per same-day visitors(€)
C.B2 Tourism enterprise(s) performance	C.B2.1.	Average length of stay of tourists (nights)
	C.B2.2.	Occupancy rate in commercial accommodation per month and average for the year
C.B3 Quantity and quality of employment	C.B3.1.	Direct tourism employment as % of total employment in the destination
	C.B3.2.	% of jobs in tourism that are seasonal
C.B4 Tourism supply chain	C.B4.1.	% of locally produced food, drinks, goods and services sourced by the destination's tourism enterprises
Section C: Social and cultural impact		
Criteria	Indicator reference	ETIS core indicators
C.C1 Community/social impact	C.C1.1.	Number of tourists/visitors per 100 residents
	C.C1.2.	% of residents who are satisfied with tourism in the destination (per month/season)
	C.C1.3.	Number of beds available in commercial accommodation establishments per 100 residents
	C.C1.4.	Number of second homes per 100 homes
C.C2 Gender equality	C.C2.1.	% of men and women employed in the tourism sector

C.C3 Inclusion/accessibility	C.C3.1.	% of commercial accommodation establishments participating in recognized accessibility information schemes
	C.C3.2.	% of public transport that is accessible to people with disabilities and specific access requirements
	C.C3.3.	% of tourist attractions that are accessible to people with disabilities and/or participating in recognized accessibility information schemes
C.C4 Protecting and enhancing cultural heritage, local identity and assets	C.C4.1.	% of residents that are satisfied with the impacts of tourism on the destination's identity
	C.C4.2.	% of the destination's events that are focused on traditional/local culture and heritage
Section D: Environmental impact		
Criteria	Indicator reference	ETIS core indicators
C.D1 Reducing transport impact	C.D1.1.	% of tourists and same-day visitors using different modes of transport to arrive at the destination
	C.D1.2.	% of tourists and same-day visitors using local/soft mobility/public transport services to get around the destination
	C.D1.3.	Average travel (km) by tourists and same-day visitors from home to the destination
	C.D1.4.	Average carbon footprint of tourists and same-day visitors travelling from home to the destination
C.D2 Climate change	C.D2.1.	% of tourism enterprises involved in climate change mitigation schemes — such as: CO ₂ offset, low energy systems, etc. — and 'adaptation' responses and actions
	C.D2.2.	% of tourism accommodation and attraction infrastructure located in 'vulnerable zones'
C.D3 Solid waste management	C.D3.1.	Waste production per tourist night compared to general population waste production per person (kg)
	C.D3.2.	% of tourism enterprises separating different types of waste
	C.D3.3.	% of total waste recycled per tourist compared to total waste recycled per resident per year
C.D4 Sewage treatment	C.D4.1.	% of sewage from the destination treated to at least secondary level prior to discharge
C.D5 Water management	C.D5.1.	Water consumption per tourist night compared to general population water consumption per resident night
	C.D5.2.	% of tourism enterprises taking actions to reduce water consumption
	C.D5.3.	% of tourism enterprises using recycled water
C.D6 Energy usage	C.D6.1.	Energy consumption per tourist night compared to general population energy consumption per resident night
	C.D6.2.	% of tourism enterprises that take actions to reduce energy consumption
	C.D6.3.	% of annual amount of energy consumed from renewable sources (Mwh) compared to overall energy consumption at destination level per year
C.D7 Landscape and biodiversity protection	C.D7.1.	% of local enterprises in the tourism sector actively supporting protection, conservation and management of local biodiversity and landscapes

European Union, 2016

Since the European Tourism Indicator System is not designed to be coastal specific, a second set of **destination indicators** is formed – both from ETIS and supplementary sources - to address the specific issues of coastal areas according to the characteristics and particularities of the predominant type of tourism activity in each type of destination.

As already presented in CO-EVOLVE destinations typology (3.16.1) regarding the specific tourism characteristics, the dominant types of tourism identified in Mediterranean coastal areas are:

1. Beach/Maritime tourism
2. Urban/Cultural tourism
3. Cruising
4. Recreational boating (Yachting/Marinas)
5. Nature/Ecotourism

In this context, the selected indicators for each type of destination (beach/maritime, urban/cultural, cruising, recreational boating, nature/ecotourism) are analyzed on the basis of four main topics or dimensions:

1. Socio-economic indicators. They outline the main socioeconomic dimensions that should be taken into consideration to provide information on the economic and social factors associated with a specific tourism activity.
2. Environmental indicators. They outline the condition and trends in the state of the ecosystem as well as the main environmental pressures that derive specifically from different tourism activities (for example the volume of waste accepted for disposal at a port at cruising destinations and the percentage of soil loss on trails at nature/ecotourism destinations).
3. Management and optimization of key assets to destination type. They outline the state, degree or performance of the key characteristics (assets) that are essential for the existence and sustainable development of the identified tourism activities (for example the number of blue flags in beach/maritime tourism destinations indicates both the state of sea water quality and the performance of related management plans).
4. Governance. They outline the processes that public authorities in association with local communities, NGOs and other stakeholders use in order to manage coastal area through policies, action plans and programmes.

Table 5: Destination indicators: Beach/Maritime tourism (Di)

Section	Indicator reference	Destination Indicators: Beach/Maritime tourism	Related literature
Di.A.Socio-economic	Di.A1.	Number of tourism-related MSMEs operating in the destination	WTO (2004)
	Di.A2.	% of total tourists visiting in peak month	WTO (2004)
	Di.A3.	Number of tourists on peak day	WTO (2004)
	Di.A4.	Number of second homes per 100 homes in coastal zones*	adapt. European Union (2016), WTO (2004)
Di.B.Environmental	Di.B1.	% of tourist infrastructure (hotels, other) located in coastal zones*	WTO (2004)
	Di.B2.	Annual change in measured shore/beach area (in %)	WTO (2004)
	Di.B3.	Level of contamination per 100 ml (fecal coliforms, campylobacter)	European Union (2016), MITOMED (2015), WTO (2004)
	Di.B4.	Number of persons per hectare (or square meter) on the beach (for annual averages, and peak day, peak month)	WTO (2004)
Di.C.Management and optimization of key assets to destination type	Di.C1.	Total km of beaches (and free beaches relative to total km of beaches)	European Union (2016), MITOMED (2015), WTO (2004)
	Di.C2.	% of beaches awarded the Blue Flag	European Union (2016), MITOMED (2015), WTO (2004)
	Di.C3.	Costs of erosion-protection measures (e.g. sea walls.)	WTO (2004)
	Di.C4.	Beach nourishment: sand volume and extension of the restored beach (m3 and m2)	adapt. European Union (2016), European Commission (2007), MITOMED (2015), WTO (2004)
Di.D.Governance	Di.D1.	Existence of up to date tourism plans and policies (YES/NO)	European Union (2016), MITOMED (2015), WTO (2004)
	Di.D2.	Existence of a land use or development plan (YES/NO)	WTO (2004)
	Di.D3.	Funding designated/spent for plan implementation	WTO (2004)
	Di.D4.	Funding designated/spent for consultation and public participation	WTO (2004)
	Di.D5.	Impact assessment of environmental, social and cultural aspects of tourism completed (YES/NO)	WTO (2004)
	Di.D6.	Degree of stakeholder participation in the planning process (Low/medium/high)	WTO (2004)
	Di.D7.	Degree of stakeholder participation in the process of implementing plans(Low/medium/high)	WTO (2004)
	Di.D8.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO)	WTO (2004)
	Di.D9.	% of plan objectives which have been met	WTO (2004)
	Di.D10.	Plan revision completed or scheduled(YES/NO)	WTO (2004)
	Di.D11.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)	adapt. UNESCO (2006)
	Di.D12.	Specific characteristics of islands taken into account in strategies for tourism development (YES/NO – based on interviews, questionnaires etc.)	own adaptation

* Coastal Zone as defined in Article 2 of the ICZM Protocol

Own elaboration

Table 6: Destination indicators: Urban/Cultural tourism (Dii)

Section	Indicator reference	Destination Indicators: Urban/Cultural tourism	Related literature
Dii.A.Socio-economic	Dii.A1.	Number of tourism-related MSMEs operating in the destination	WTO (2004)
	Dii.A2.	Number and origin of visitors to cultural sites per season (day, month, year)	WTO (2004)
	Dii.A3.	% of total tourists visiting in peak month and average for the year	WTO (2004)
	Dii.A4.	Number of tourists on peak day	WTO (2004)
	Dii.A5.	% of key sites operating all year	WTO (2004)
Dii.B.Environmental	Dii.B1.	Total number of tourists per square Km in key sites (crowding/spatial distribution)	WTO (2004)
Dii.C.Management and optimization of key assets to destination type	Dii.C1.	% of restored historic buildings	WTO (2004)
	Dii.C2.	Number of buildings and/or districts listed on endangered sites lists (i.e. World Heritage, World Monuments Fund)	WTO (2004)
	Dii.C3.	% of district under protection	adapt. WTO (2004)
	Dii.C4.	% of sites under a management and monitoring system for protection of cultural sites	adapt. GSTC (2013)
	Dii.C5.	Number and % of guided tours and/or publications (promotion initiatives)	WTO (2004)
	Dii.C6.	Accessibility of tourist attractions by public transport(YES/NO)	WTO (2004)
Dii.D.Governance	Dii.D1.	Existence of up to date tourism plans and policies (YES/NO)	European Union (2016), MITOMED (2015), WTO (2004)
	Dii.D2.	Existence of a land use or development plan(YES/NO)	WTO (2004)
	Dii.D3.	Funding of public and private finance spent in improvement of the physical urban environment	WTO (2004)
	Dii.D4.	Funding spent in restoration of historic buildings	WTO (2004)
	Dii.D5.	Completed impact assessment of environmental, social and cultural aspects of tourism (in terms of evaluating a tourism plan) (YES/NO)	WTO (2004)
	Dii.D6.	Degree of stakeholder participation in the planning process(Low/medium/high)	WTO (2004)
	Dii.D7.	Degree of stakeholder participation in the process of implementing plans(Low/medium/high)	WTO (2004)
	Dii.D8.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO)	WTO (2004)
	Dii.D9.	% of plan objectives which have been met	WTO (2004)
	Dii.D10.	Plan revision completed or scheduled(YES/NO)	WTO (2004)
	Dii.D11.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)	adapt. UNESCO (2006)
	Dii.D12.	Specific characteristics of islands taken into account in strategies for tourism development (YES/NO – based on interviews, questionnaires etc.)	own adaptation

Own elaboration

Table 7: Destination indicators: Cruising (Diii)

Section	Indicator reference	Destination Indicators: Cruising	Related literature
Diii.A.Socio-economic	Diii.A1.	Number of tourism-related MSMEs operating in the destination	WTO (2004)
	Diii.A2.	Total jobs directly attributable to cruise industry	WTO (2004)
	Diii.A3.	% days with cruise ship(s) in port (peak season, all year)	WTO (2004)
	Diii.A4.	Number of ship visits per year (by month)	WTO (2004)
	Diii.A5.	% annual ship visits arriving in peak month/season	WTO (2004)
	Diii.A6.	Average duration of stay in port (in days)	WTO (2004)
	Diii.A7.	Total and average port fees and charges received per ship visit	WTO (2004)
	Diii.A8.	Average spending per cruise ship visitor (€)	WTO (2004)
	Diii.A9.	Peak day passengers discharged (total number, ratio of passengers discharged to local population)	WTO (2004)
Diii.B.Environmental	Diii.B1.	Volume of fresh water on-loaded at port (m ³)	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.B2.	Volume of waste accepted for disposal (solid, liquid) at port (m ³)	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.B3.	% of all ship visits by ships meeting CLIA or equivalent standards	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.B4.	% ships visiting the destination which have zero untreated discharge systems, or use marine sewage treatment systems	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.B5.	Number of discharge violations (Ballast water)	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.B6.	Level of contamination of seawater per 100ml (heavy metals)	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
Diii.C.Management and optimization of key assets to destination type	Diii.C1.	Maximum capacity of docking facilities (number)	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.C2.	% of functional passenger terminals	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.C3.	Access to transportation networks (railway and airports) (YES/NO)	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.C4.	Access to public transportation systems(YES/NO)	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
	Diii.C5.	% visitors taking organized shore tours	Plan Bleu (2011), WTO (2004), WTO and APTEC (2016)
Diii.D.Governance	Diii.D1.	Existence of up to date tourism plans and policies(YES/NO)	European Union (2016), MITOMED (2015), WTO (2004)

	Diii.D2.	Existence of Master Plan(YES/NO)	WTO (2004)
	Diii.D3.	Funding designated/spent for plan implementation	WTO (2004)
	Diii.D4.	Funding designated/spent for consultation and public participation	WTO (2004)
	Diii.D5.	Completed impact assessment of environmental, social and cultural aspects of tourism (in terms of evaluating a tourism plan) (YES/NO)	WTO (2004)
	Diii.D6.	Degree of stakeholder participation in the planning process(Low/medium/high)	WTO (2004)
	Diii.D7.	Degree of stakeholder participation in the process of implementing plans(Low/medium/high)	WTO (2004)
	Diii.D8.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO)	WTO (2004)
	Diii.D9.	% of plan objectives which have been met	WTO (2004)
	Diii.D10.	Plan revision completed or scheduled(YES/NO)	WTO (2004)
	Diii.D11.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)	adapt. UNESCO (2006)
	Diii.D12.	Specific characteristics of islands taken into account in strategies for tourism development (YES/NO – based on interviews, questionnaires etc.)	own adaptation

Own elaboration

Table 8: Destination indicators: Recreational boating (Div)

Section	Indicator reference	Destination Indicators: Recreational boating (Yachting/Marinas)	Related literature
Div.A.Socio-economic	Div.A1.	Number of tourism-related MSMEs operating in the destination	WTO (2004)
	Div.A2.	Number of yachts per year (by month)	WTO (2004)
	Div.A3.	% annual yachts arriving in peak month/ season	WTO (2004)
	Div.A4.	Average duration of stay in port (in days)	WTO (2004)
	Div.A5.	Total and average port fees and charges received per boat (€)	WTO (2004)
Div.B.Environmental	Div.B1.	Volume of fresh water on-loaded at port(m ³)	Plan Bleu (2011), WTO (2004)
	Div.B2.	Volume of waste accepted for disposal (solid, liquid) at port(m ³)	Plan Bleu (2011), WTO (2004)
	Div.B3.	% of all ship visits by ships meeting CLIA or equivalent standards	Plan Bleu (2011), WTO (2004)
	Div.B4.	% ships visiting the destination which have zero untreated discharge systems, or use marine sewage treatment systems	Plan Bleu (2011), WTO (2004)
	Div.B5.	Number of reported pollution or contamination events per annum (by month) in watercourses receiving effluents (in tourist harbours/marinas)	Plan Bleu (2011), WTO (2004)
	Div.B6.	Number of discharge violations (Ballast water)	Plan Bleu (2011), WTO (2004)
	Div.B7.	Level of contamination of seawater per 100 ml (heavy metals)	Plan Bleu (2011), WTO (2004)
Div.C.Management and optimization of key assets to destination type	Div.C1.	Number of berths and moorings for recreational boating	European Union (2016), European Commission (2007), MITOMED (2015)
	Div.C2.	Access to public transportation systems (YES/NO)	Plan Bleu (2011), WTO (2004)
Div.D.Governance	Div.D1.	Existence of up to date tourism plans and policies(YES/NO)	European Union (2016), MITOMED (2015), WTO (2004)
	Div.D2.	Existence of a land use or development plan(YES/NO)	WTO (2004)
	Div.D3.	Funding designated/spent for plan implementation	WTO (2004)
	Div.D4.	Funding designated/spent for consultation and public participation	WTO (2004)
	Div.D5.	Completed impact assessment of environmental, social and cultural aspects of tourism (in terms of evaluating a tourism plan) (YES/NO)	WTO (2004)
	Div.D6.	Degree of stakeholder participation in the planning process(Low/medium/high)	WTO (2004)
	Div.D7.	Degree of stakeholder participation in the process of implementing plans(Low/medium/high)	WTO (2004)
	Div.D8.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO)	WTO (2004)
	Div.D9.	% of plan objectives which have been met	WTO (2004)
	Div.D10.	Plan revision completed or scheduled(YES/NO)	WTO (2004)
	Div.D11.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)	adapt. UNESCO (2006)
	Div.D12.	Specific characteristics of islands taken into account in strategies for tourism development (YES/NO – based on interviews, questionnaires etc.)	own adaptation

Own elaboration

Table 9: Destination indicators: Nature/Ecotourism (Dv)

Section	Indicator reference	Destination Indicators: Nature/Ecotourism	Related literature
Dv.A.Socio-economic	Dv.A1.	Number of tourism-related MSMEs operating in the destination	WTO (2004)
	Dv.A2.	% occupancy of camping sites and accommodation	WTO (2004)
	Dv.A3.	Total number of visitors to parks and to key sites	WTO (2004)
	Dv.A4.	Number of tourists per square meter of the site (mean number/peak month average/peak day)	WTO (2004)
Dv.B.Environmental	Dv.B1.	Number of sites/ecosystems/assets considered to be damaged or threatened (% of all defined systems/assets in protected area)	European Commission (2007), WTO (2004)
	Dv.B2.	% of protected area in eroded or degraded state	WTO (2004)
	Dv.B3.	% of park area affected by unauthorized activities	WTO (2004)
	Dv.B4.	% soil loss on trails	WTO (2004)
	Dv.B5.	Nº of visitors acceptable, according to the capacity of the equipment and facilities of the site (depends on capacity studies establishing limits)	WTO (2004)
	Dv.B6.	% of sites under a management and monitoring system for protection of cultural sites	adapt. GSTC (2013)
Dv.C.Management and optimization of key assets to destination type	Dv.C1.	% of site area occupied by rare or unique species	WTO (2004)
	Dv.C2.	% of endemic species at the site	WTO (2004)
	Dv.C3.	Nº of unique or rare species present at the site	European Commission (2007), WTO (2004)
	Dv.C4.	Inventory of attractions (distinguished natural features, including flora and fauna, landscapes) (YES/NO)	WTO (2004)
	Dv.C5.	Nº of access routes in good condition for tourism use, (paths, motorized, airstrips, boat access, etc)	WTO (2004)
	Dv.C6.	Nº of enforcement personnel per visitor	WTO (2004)
Dv.D.Governance	Dv.D1.	Existence of up to date tourism plans and policies(YES/NO)	European Union (2016), MITOMED (2015), WTO (2004)
	Dv.D2.	Existence of environmental plan and management(YES/NO)	WTO (2004)
	Dv.D3.	% of protected area subject to different levels of control	WTO (2004)
	Dv.D4.	Funding designated/spent for plan implementation	WTO (2004)
	Dv.D5.	Funding designated/spent for consultation and public participation	WTO (2004)
	Dv.D6.	Co-operation from the government for development of ecotourism (YES/NO - promotion of economic instruments)	Bhattacharya and Kumari (2004)
	Dv.D7.	Completed impact assessment of environmental, social and cultural aspects of tourism (in terms of evaluating a tourism plan) (YES/NO)	WTO (2004)
	Dv.D8.	Degree of stakeholder participation in the planning process(Low/medium/high)	WTO (2004)
	Dv.D9.	Degree of stakeholder participation in the process of implementing plans(Low/medium/high)	WTO (2004)
	Dv.D10.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO) → P.I.	WTO (2004)
	Dv.D11.	% of plan objectives which have been met	WTO (2004)
	Dv.D12.	Plan revision completed or scheduled(YES/NO)	WTO (2004)
	Dv.D13.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)	adapt. UNESCO (2006)
	Dv.D14.	Specific characteristics of islands taken into account in strategies for tourism development (YES/NO – based on interviews, questionnaires etc.)	own adaptation

Own elaboration

Both sets of indicators (core and destination) will be adapted in the case of the proposed pilot areas (Task 3.17) according to the specific challenges deriving through the analysis of threats and enabling factors and the type(s) of tourism activity developed in each destination. Therefore, in the context of pilot area analysis, ***pilot area-specific indicators*** are also developed on the basis of area-specific key particularities which may be considered as critical towards assessing sustainability of the destination. Since different destinations have different key limiting factors, this third set of indicators might specify even further some of the relevant criteria on the basis of limiting factors as for example carrying capacity issues. In some cases only a single factor may prove more than enough to set the limits in assessing carrying capacity for tourism development in certain destinations. In any case it must be noted that limits are not static and can be modified (increased or decreased) either because of the constant evolution of tourism destinations or the implementation of management measures.

According to the above and adjusted to the rationale of CO-EVOLVE, a third set of pilot area-specific indicators is provided with specific linkages to:

1. Main threats to co-evolution identified in touristic destinations at Mediterranean scale.
 - Sustaining cultural assets and identity
 - Climate change and morphological stability
 - Littoralization and urbanization
 - Touristic fluxes and carrying capacity
 - Pollution and other anthropogenic pressures affecting ecosystems
 - Conflicts among different uses on land and at sea and land-sea interaction
2. Enabling factors for co-evolution representing the key answers to threats identified at Mediterranean scale.
3. Governance issues related to co-evolution of tourism and environment in Mediterranean destinations. Governance issues relate to the existence and implementation of tourism and environmental planning policies, action plans and public expenditure as well as the involvement and interaction of public and private stakeholders in the planning process.

The pilot area-specific indicators may be further developed and enriched through pilot area analyses to address the specific limiting factors of each area and serve as feedback to the second set of destination indicators, completing the destinations' tourism sustainability profile.

Table 10: Pilot area-specific indicators for threats, enabling factors and governance (P)

Section	Key issues addressed	Indicator reference	Pilot area-specific indicators	Related literature
P.A. Threats	P.A1.Climate changes and morphological stability	P.A1.1.	Annual change in measured shore/beach area (in %)	WTO (2004)
		P.A1.2.	% shoreline subjected to erosion	WTO (2004)
		P.A1.3.	Coastal area in degraded condition (low/medium/high)	adapt. WTO (2004)
		P.A1.4.	Size, density and proportion of the population living in coastal areas (year average and peak month)	European Commission (2007)
		P.A1.5.	Extreme events on the coast per year(number)	own adaptation
		P.A1.6.	Coastal flooding events per year(number)	own adaptation
		P.A1.7.	Estimated sea level rise (low, medium, high)	own adaptation
	P.A2.Littoralization and urbanization	P.A2.1.	Land occupied by artificial surfaces within the first 500m of coast (in %)	MED-IAMER (2015), European Commission (2007)
		P.A2.2.	% of area designated for tourism purposes	WTO (2004)
		P.A2.3.	% of total coastal capacity used (average and peak)	WTO (2004)
		P.A2.4.	Ridgeline or coastline continuity (% intrusion on ridge and coastline)	WTO (2004)
	P.A3.Touristic fluxes and carrying capacity	P.A3.1.	Total tourist numbers (mean, monthly, peak) (categorized by their type of activity)	WTO (2004)
		P.A3.2.	Number of tourists per square meter of key site (e.g., at beaches, attractions), per square kilometer of the destination, - mean number/peak period average	WTO (2004)
		P.A3.3.	Water use (total volume in liters or m ³ consumed and liters per tourist per day)	WTO (2004)
		P.A3.4.	Number of shortage incidents per year or number of days per year where there are water supply shortages	European Commission (2007), WTO (2004)
	P.A4.Pollution and other anthropogenic pressures affecting ecosystems	P.A4.1.	Volume (m ³) of litter collected per given length of shoreline	European Commission (2007), WTO (2004)
		P.A4.2.	Rate of loss of protected areas	European Commission (2007), WTO (2004)
		P.A4.3.	Percentage of bathing sites with excellent water quality	adapt. EEA Bathing Water Directive - Status of bathing water
		P.A4.4.	Natural land cover classes/artificial land cover classes	adapt. Corine Land Cover 2012
	P.A5.Conflicts among different uses on land and sea and land-sea interaction	P.A5.1.	Total use of water by tourism sector (Tourism as a % of all users)	WTO (2004)
		P.A5.2.	Energy use by tourism industry as % of total	WTO (2004)
		P.A5.3.	% increase/decrease in land and housing prices over time	WTO (2004)

P.B. Enabling factors	P.B1.Coastal Protection Measures	P.B1.1.	Existence of a coastal planning management system	adapt. WTO (2004)
		P.B1.2.	Length of protected and defended coastline (km)	European Commission (2007), WTO (2004)
		P.B1.3.	% of tourist area and infrastructure with sea defenses	WTO (2004)
		P.B1.4.	Cost of erosion prevention and repair measures per year (€)	WTO (2004)
		P.B1.5.	Typology of coastal defence measures (to be selected from the list of the defence techniques described in Report 3.8.1)	own adaptation
		P.B1.6.	Cost for the maintenance of defence measures per year (€)	own adaptation
		P.B1.7.	% of sites where coastal protection measures limit access to beach	adapt. WTO (2004)
		P.B1.8.	Influence (positive or negative) of defence measures presence on tourist appeal of the area (Low/medium/high influence based on interviews, questionnaire etc)	own adaptation
	P.B2.Ecosystems Protection	P.B2.1.	Extent of protected area(s) in km ² (classified by level of protection, according to IUCN categories)	WTO (2004)
		P.B2.2.	Area of natural and semi-natural habitat (based on Natura 2000 sites and EU habitats - in km ²)	European Commission (2007), WTO (2004)
		P.B2.3.	Health of population of key indicator species (measuring rise or fall of key indicators species - counts, sightings)	WTO (2004)
		P.B2.4.	% of tourism establishments (or accommodation) on (suitable) treatment systems	WTO (2004)
		P.B2.5.	Municipal waste recycled per year	own adaptation (based on municipal data and Eurostat)
		P.B2.6.	Implementation of Natura 2000 management plans	own adaptation (based on Natura 2000 data)
	P.B3.Water cycle and depuration	P.B3.1.	Water saving (% reduced, recaptured or recycled)	WTO (2004)
		P.B3.2.	% loss from reticulated system	WTO (2004)
		P.B3.3.	% water supply imported to region	WTO (2004)
		P.B3.4.	% of tourism establishments with water treated to international potable standards	WTO (2004)
	P.B4.Transport and accessibility	P.B4.1.	Density of public transport (route kms per km ²)	WTO (2004)
		P.B4.2.	Modes of transport used by tourists to reach destination (airplane, car, rail, bicycle, walking, other)	WTO (2004)
		P.B4.3.	Number of passengers transported by local public transport for tourism / leisure purposes (compared to number of tourists using individual transport)	WTO (2004)

		P.B4.4.	% of accommodations, tourism facilities and other tourist attractions accessible by public transport	WTO (2004)
		P.B4.5.	Ratio of travel expenses by public versus private transport inside the destination	WTO (2004)
		P.B4.6.	Implementation of an integrated environmentally sound transport planning strategy (yes / no)	WTO (2004)
		P.B4.7.	N° of dredging operations needed per year	own adaptation
		P.B4.8.	Volume (m ³) of sediments dredged per year	own adaptation
		P.B4.9.	Cost of dredging operations per year (€)	own adaptation
P.C. Governance	P.C1.Planning	P.C1.1.	Number of environmental, social, cultural and economic actions recommended in plan	WTO (2004)
		P.C1.2.	% environmental, social, cultural actions recommended in plan which have been implemented	WTO (2004)
	P.C2.Public Sector	P.C2.1.	Involvement of stakeholders in tourism planning activities (% of activities, number involved)	WTO (2004)
	P.C3.Private sector	P.C3.1.	Level of tourism sector involvement in public policy (advisory bodies, review panels etc)	WTO (2004)
		P.C3.2.	% tour operators and hotels with environmental strategy or policy	WTO (2004)
		P.C3.3.	% tourism managers with environmental training	WTO (2004)

Own elaboration

The multidimensional approach described above represents an ideal set of indicators that addresses the key issues in typical Mediterranean destinations as described in the context of Co-evolve – *the co-evolution of human activities and natural systems for the development of sustainable coastal and maritime tourism*. This ideal Sustainability Toolkit may serve as the basis for current and future planning and development by indicating the need to systematically collect the necessary data for measuring and monitoring tourism sustainability in coastal areas.

As a starting point, taking into account also the limited availability of data at present, a set of indicators is selected and identified as **Priority Indicators (P.I.)** to highlight a) the most essential and critical issues in most Mediterranean coastal tourism destinations and b) the most important specificities of different types of tourism activities. The following list of indicators is a first attempt to highlight a basic list of indicators and is meant to act as a starting basis to be used for comparisons among coastal tourism destinations in the Mediterranean basin. The Co-evolve Priority Indicators list is expected to be enriched and extended by each pilot area according to its particular tourism characteristics, carrying capacity issues and availability of data.

Table 11: Co-evolve Priority Indicators list

Indic. Ref.	Core indicators
C.A1.1.	% of tourism enterprises/establishments in the destination using a voluntary certification/labeling for environmental /quality/sustainability and/or Corporate Social Responsibility
C.B1.1.	Number of tourist nights per month
C.B2.1.	Average length of stay of tourists (nights)
C.B3.1.	Direct tourism employment as % of total employment in the destination
C.C1.1.	Number of tourists/visitors per 100 residents
C.D1.4.	Average carbon footprint of tourists and same-day visitors travelling from home to the destination
C.D3.1.	Waste production per tourist night compared to general population waste production per person (kg)
C.D5.1.	Water consumption per tourist night compared to general population water consumption per resident night
C.D5.2.	% of tourism enterprises taking actions to reduce water consumption
C.D6.2.	% of tourism enterprises that take actions to reduce energy consumption
C.D6.3.	% of annual amount of energy consumed from renewable sources (Mwh) compared to overall energy consumption at destination level per year
C.D7.1.	% of local enterprises in the tourism sector actively supporting protection, conservation and management of local biodiversity and landscapes
Destination Indicators: Di.Beach/Maritime tourism	
Di.A4.	Number of second homes per 100 homes in coastal zones*
Di.B1.	% of tourist infrastructure (hotels, other) located in coastal zones*
Di.C2.	% of beaches awarded the Blue Flag
Di.C3.	Costs of erosion-protection measures (e.g. sea walls.)
Di.C4.	Beach nourishment: sand volume and extension of the restored beach (m3 and m2)
Di.D1.	Existence of up to date tourism plans and policies (YES/NO)
Di.D2.	Existence of a land use or development plan (YES/NO)
Di.D8.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO)
Di.D11.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)
Destination Indicators: Dii.Urban/Cultural tourism	
Dii.A3.	% of total tourists visiting in peak month and average for the year
Dii.B1.	Total number of tourists per square Km in key sites (crowding/spatial distribution)
Dii.C4.	% of sites under a management and monitoring system for protection of cultural sites
Dii.D1.	Existence of up to date tourism plans and policies (YES/NO)
Dii.D2.	Existence of a land use or development plan(YES/NO)
Dii.D8.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO)
Dii.D11.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)
Destination Indicators: Diii.Cruising	
Diii.A4.	Number of ship visits per year (by month)
Diii.A6.	Average duration of stay in port (in days)
Diii.A8.	Average spending per cruise ship visitor (€)
Diii.B1.	Volume of fresh water on-loaded at port (m ³)
Diii.B2.	Volume of waste accepted for disposal (solid, liquid) at port (m ³)
Diii.C1.	Maximum capacity of docking facilities (number)

Diii.D1.	Existence of up to date tourism plans and policies(YES/NO)
Diii.D2.	Existence of Master Plan(YES/NO)
Diii.D8.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO)
Diii.D11.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)
Destination Indicators: Div.Recreational boating (Yachting/Marinas)	
Div.A2.	Number of yachts per year (by month)
Div.A4.	Average duration of stay in port (in days)
Div.B1.	Volume of fresh water on-loaded at port(m ³)
Div.B2.	Volume of waste accepted for disposal (solid, liquid) at port(m ³)
Div.C1.	Number of berths and moorings for recreational boating
Div.D1.	Existence of up to date tourism plans and policies(YES/NO)
Div.D2.	Existence of a land use or development plan(YES/NO)
Div.D8.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO)
Div.D11.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)
Destination Indicators: Dv.Nature/Ecotourism	
Dv.A3.	Total number of visitors to parks and to key sites
Dv.B1.	Number of sites/ecosystems/assets considered to be damaged or threatened (% of all defined systems/assets in protected area)
Dv.B5.	N° of visitors acceptable, according to the capacity of the equipment and facilities of the site (depends on capacity studies establishing limits)
Dv.C1.	% of site area occupied by rare or unique species
Dv.C2.	% of endemic species at the site
Dv.D1.	Existence of up to date tourism plans and policies(YES/NO)
Dv.D2.	Existence of environmental plan and management(YES/NO)
Dv.D10.	Existence of performance indicators designated for evaluating the plan developed and used(YES/NO) → P.I.
Dv.D13.	Existence and functioning of a representative coordinating mechanism for MSP/ICZM (YES/NO)
Pilot area-specific indicators	
P.A1.2.	% shoreline subjected to erosion
P.A1.3.	Coastal area in degraded condition (low/medium/high)
P.A1.6.	Coastal flooding events per year(number)
P.A2.1.	Land occupied by artificial surfaces within the first 500m of coast (in %)
P.A2.2.	% of area designated for tourism purposes
P.A3.1.	Total tourist numbers (mean, monthly, peak) (categorized by their type of activity)
P.A3.3.	Water use (total volume in liters or m ³ consumed and liters per tourist per day)
P.A4.2.	Rate of loss of protected areas
P.A4.3.	Percentage of bathing sites with excellent water quality
P.A5.1.	Total use of water by tourism sector (Tourism as a % of all users)
P.A5.2.	Energy use by tourism industry as % of total
P.B1.1.	Existence of a coastal planning management system
P.B1.2.	Length of protected and defended coastline (km)
P.B2.6.	Implementation of Natura 2000 management plans
P.B4.8.	Volume (m ³) of sediments dredged per year
P.C1.2.	% environmental, social, cultural actions recommended in plan which have been implemented
P.C3.1.	Level of tourism sector involvement in public policy (advisory bodies, review panels etc)

3. References

- Bhattacharya, P. and Kumari, S. (2004). Application of Criteria and Indicator for Sustainable Ecotourism: Scenario under Globalization. In: *The Commons in an Age of Global Transition: Challenges, Risks and Opportunities, 10th Biennial Conference of the International Association for the Study of Common Property*. Oaxaca, Mexico.
- Dupeyras, A. and N. MacCallum (2013), "Indicators for Measuring Competitiveness in Tourism: A Guidance Document", *OECD Tourism Papers*, 2013/02, OECD Publishing.
- ESPON, (2006). *Preparatory Study of Spatially Relevant Aspects of Tourism*. Final Report ESPON Project 1.4.5. [online] Luxemburg: ESPON Monitoring Committee. Available at: https://www.espon.eu/export/sites/default/Documents/Projects/ESPON2006Projects/StudiesScientificSupportProjects/Tourism/fr-1.4.5-full_revised_Jan2007.pdf [Accessed 30 Mar. 2017].
- European Commission, (2007). Deduce project. Using indicators to measure sustainable development at the European coasts. *Deduce Newsletter*, [online] 3. Available at: <http://www.mepa.org.mt/file.aspx?f=2638> [Accessed 30 Mar. 2017].
- European Union, (2016). *The European Tourism Indicator System. ETIS toolkit for sustainable destination management*. [online] Luxembourg: Publications Office of the European Union. Available at: <http://ec.europa.eu/DocsRoom/documents/21749/attachments/1/translations/en/renditions/pdf> [Accessed 30 Mar. 2017].
- Global Sustainable Tourism Council (GSTC). (2013). *GSTC Destination Criteria - Global Sustainable Tourism Council (GSTC)*. [online] Available at: <https://www.gstccouncil.org/gstc-criteria/gstc-destination-criteria/> [Accessed 27 Jun. 2017].
- Manca, e. and Santarossa, I. (2016). *Tourism and sustainability in the Mediterranean: key facts and trends*. Technical Report. [online] UNEP, MAP, Plan Bleu. Available at: http://planbleu.org/sites/default/files/publications/tourism_and_sustainability_june2016.pdf [Accessed 30 Mar. 2017].
- MITOMED, (2015). *GAP Analysis. Med Programme 2007-2013*. Work Package 2. [online] MED Maritime Integrated Projects. Available at: <http://www.medmaritimeprojects.eu/download/ProjectMitomed/MITOMED%20GAP%20analysis.pdf> [Accessed 30 Mar. 2017].
- PAP/RAC, (1997). *Guidelines for Carrying Capacity Assessment for Tourism in Mediterranean Coastal Areas*. [online] Split: Priority Actions Programme, Regional Activity Centre. Available at: <http://www.pap-thecoastcentre.org/pdfs/Guidelines%20CCA%20Tourism.pdf> [Accessed 30 Mar. 2017].

- Plan Bleu (2011). *Cruises and Recreational Boating in the Mediterranean*. Final Draft. Plan Bleu/UNEP/MAP. [online] Available at: https://planbleu.org/sites/default/files/publications/2-1-en_croisiereplaisance.pdf [Accessed 30 Mar. 2017].
- Spilanis I., Vayanni H. and Glyptou K. (2009). Profile of Sustainability in some Mediterranean tourism destinations. The evaluating framework of the tourism activity. Plan bleu/UNEP/MAP Regional Activity Centre. Sophia Antipolis.
- Indicators of Sustainable Development for Tourism Destinations: A Guidebook..* [online] Madrid: World Tourism Organization. Available at: <http://www.e-unwto.org/doi/pdf/10.18111/9789284407262> [Accessed 30 Mar. 2017].
- UNESCO, (2006). A Handbook for Measuring the Progress and Outcomes of Integrated Coastal and Ocean Management. IOC Manuals and Guides, 46; ICAM Dossier, 2. Paris.
- WTO and APTEC, (2017). *Sustainable Cruise Tourism Development Strategies: Tackling the Challenges in Itinerary Design in South-East Asia*. [online] Madrid: World Tourism Organization and Asia-Pacific Tourism Exchange Center. Available at: <http://www.e-unwto.org/doi/pdf/10.18111/9789284417292> [Accessed 30 Mar. 2017].