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support INsular and low density areas in the transition towards a more **CIRCuLar Economy**

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D.4.4.1: Replication Package: Synthetic version of assessed regional strategies

WP4 : Transferring Activity 4.1: Assess to improve: evaluation and reception of regional/national strategies Partner in charge: The Energy and Water Agency



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List of Abbreviations and Terms

EBRD	European Bank for Reconstruction and Development
GDP	Gross Domestic Product
GHG	Greenhouse gas
GVA	Gross Value Added
HORECA	Hotels, restaurants, coffee shops, catering
NECP	National Energy and Climate Plan
SSSA	Sant' Anna School of Advanced Studies
SUMP	Sustainable Urban Mobility Plan
TCCA	Tourism Carrying Capacity Assessment
WTO	World Tourism Organisation



1. Introduction

The INCIRCLE Interreg MED project¹ aims to support insular and sparsely populated areas of the Mediterranean Sea basin to address the growing environmental challenges caused by tourism activities by promoting the application of circular economy principles in the tourism sector. Towards this end, the INCIRCLE project developed a shared methodological framework for those with a strategic role to lead them towards sustainable planning and solution for the tourism sector by incorporating the circularity aspects during all the phases of policymaking.

This report "Synthetic version of assessed regional strategies" summarises the main aspects of **Deliverable 4.1.2**: *Collection of assessment reports of regional/national strategies* (The Energy and Water Agency, 2021a), with the scope to be used in aiding replicating activities (D4.4.1: *Replication package*). Deliverable 4.1.2 builds on other INCIRCLE deliverables, including the **Deliverable 3.1.1**: *Operational Model* (AREA Science Park, 2021), acting as the methodological tool for the drafting of strategies, and is supported by **Deliverable 3.3.1**: *INCIRCLE Set of Circular Tourism Indicators* (Sant' Anna School of Advanced Studies, 2020a), and **Deliverable 3.5.3**: *Assessment reports on current state of circular tourism in partner territories* (Sant' Anna School of Advanced Studies , 2020b).

This document presents the evaluation findings of five proposed circular strategies developed for Albania, Balearic Islands, Crete, Cyprus, and Malta. The strategies focus on the INCIRCLE pillars, including water and waste management, efficient energy use and sustainable mobility and the management of cross-cutting issues within the tourism sector.

¹ The project is co-financed by the European Regional Development Fund.



2. Literature Review

In 1995, the World Tourism Organisation (WTO) joined other international organisations for the first International Summit on Sustainable Tourism leading to the first model on sustainable tourism. Sharpley (2000), identifies two main aspects of defining sustainable tourism: sustainable tourism as an economic activity and tourism as an element of wider sustainable policies. Both definitions involve the application of sustainable practices through which destinations can maximise the positive contribution that tourism brings to several sectors in an economy.

The Mediterranean Region welcomed more than 400 million international tourists in 2019 generating 11 million jobs. As a result, the tourism sector accounted for up to 15% of regional GDP, with a 75% growth since 1995 (Fosse, Kosmas, & Gonzalez, 2021). This coupled with the diverse endangered ecosystems that characterise the Mediterranean Sea and the extent of environmental degradation that the Mediterranean region is withstanding, emphasise the importance of nurturing sustainable practices within such an important sector. In addition, these forces have repercussions on the tourism sector itself which many Mediterranean regions depend upon. Through the Mediterranean Strategy for Sustainable Development 2016-2025 and the MED sustainable tourism community measures are being adopted to start a pathway to a sustainable Mediterranean tourism sector (UNEP/MAP, 2016).

On a wider scale, at an EU level, other influential policies impact the move towards sustainable tourism are also being adopted. The EU influences the transition to a sustainable tourism sector in four main ways through; Commission Communications that directly impact tourism; thematic and research networks; specific actions that aim to foster the sustainable development of tourism and policies in other thematic fields that have an impact on tourism and its sustainability (INTERREG Danube Transnational Programme, 2018). Most recently in March 2021, the European Parliament drafted an EU strategy for sustainable tourism (European Parliament, 2021) which targets rebuilding the tourism sector in a post Covid-19 era, refocusing policy within the Union Framework, strengthening a more sustainable transition, ensuring a responsible and smarter tourist sector, and rethinking the concept of tourism when planning the industry's future. The EU Green Deal stands at the forefront for circular practices across all fields in the EU including the tourism sector. It acts as a roadmap to reach sustainable targets by 2030 and 2050 through several cross-cutting policies that directly and/or indirectly contribute to a more circular tourism sector. This includes the sustainable mobility strategy, the farm to fork strategy and the circular economy actions plan (Fetting, 2020). The European Commission's continued attention on sustainability also led to the development of a European system of indicators for the EU's sustainable development plan, which in turn resulted in the European Tourism Indicator System for sustainable tourism. The system focuses on the monitoring, management, and sustainability enhancement of tourist destinations. Policies, guidelines, and actions around the sectors of waste, water, energy, and mobility that are considered to influence sustainability within the tourism industry and are considered as an integral part in the development of circular strategies for the tourism sector as part of the INCIRCLE Project.

From an international perspective, several stakeholders, and organisations have started addressing the concept of circularity and devised strategies for businesses and policy makers to ease this transition. The Ellen MacArthur Foundation was created in 2010 to propagate innovative ideas around sustainability and expedite the transition to a circular, regenerative, and restorative economy. Through its circular procurement framework, the Foundation provides an overview of the intervention points businesses and policy makers may utilise to make their purchasing decisions more circular and engage their suppliers in talks and collaborative circular partnerships. Similarly, McKinsey & Co developed the ReSOLVE Framework which takes the core components of



circularity and applies them into 6 actions; Regenerate, Share, Optimise, Loop, Virtualise and Exchange (Mckinsey& Company, 2016).



3. Methodological approach for Strategy Evaluation

Partners' strategies were assessed by means of the **Deliverable 4.1.1**: *Evaluation Pack: Strategy Assessment Framework* (The Energy and Water Agency , 2021b). The Evaluation Pack is comprised of two separate documents: Strategy Evaluation Framework Report, and the Synthetic Strategy Summary Template. The evaluation follows a structured and formative approach with the intention of improving the value and effectiveness of the draft Strategy (formation begins through D3.1.1: Operational model). This evaluation first provides a *Summary* of each Strategy, by briefly providing the context of the Strategy in terms of the state-of-play of the tourism sector and its circularity through a description of the current state of each INCIRCLE pillar.

A **Gap Analysis** is carried out from two main perspectives to identify differences:

- 1. Between the shared common vision, goals and main targets as identified in the INCIRCLE Strategy and relevant existing policy in the partner territory, and
- 2. Between the INCIRCLE measures set out in the Strategy (as elaborated on the Synthetic Strategy Summary) and the objectives of the Strategy.

This approach ensures that gaps which remain unaddressed in the INCIRCLE Strategy are identified, by comparing the Strategy to relevant policies in the partner territory and also to the territory needs as recognised in the context, and through the stakeholder consultations. This is carried out at the level of each INCIRCLE pillar (for a more in-depth explanation of the Gap Analysis, refer to Deliverable 4.1.2: *Collection of assessment reports of regional/national strategies*).

The **costs** of the INCIRCLE measures, which are broken down in terms of the INCIRCLE pillars (water, energy, waste, mobility, and a horizontal approach), and five INCIRCLE principles (Reduce, Regenerate, Rethink, Innovate and Revalue), are obtained from the Strategy. It must be noted, that on the one hand, the cost of a number of measures may be underestimated because cost information is not available, whilst on the other hand, the cost of other measures may be overestimated because they refer to measures which are not specific to the tourism sector. Thus, in the latter case, costs may be capturing the entire budget allocated for such actions, which generally refer to infrastructural investments typically undertaken for the benefit of all the sectors within the territory and not necessarily specific to the tourism sector.

The next step in this evaluation process is the **Calculation of the Strategy's Circularity**, conducted according to the requirements of the revised Strategy Evaluation Framework (The Energy and Water Agency , 2021b). The said framework utilises different metrics and measures to test the circularity of the INCIRCLE strategies. For each of the five INCIRCLE principles, the framework identifies five metrics each focusing on a different pillar. The metrics refers to enabler normative questions which investigate the presence or absence of appropriate measures in the strategy, with each metric thus encompassing five measure types to aid the strategy's assessment. A total of 125 measure types are identified in the Evaluation Framework, distributed equally across the five pillars. The full list of measure types identified in the Evaluation Framework are available in Annex A of this document. They are regrouped by pillar and numbered from 1 to 25 following the same order as they appear in the Evaluation Framework report. Moreover, a visual representation of these measures can be found in Annex B.

The 25 measure types under each pillar are crucial to the calculation of the strategies' circularity as these provide the basis for allocating scores to the INCIRCLE measures for the partner territory. Each measure type is given a rating expressed in terms of **0**, **1** or **2**, according to the requirements of the measure type. Furthermore,



weightings are assigned to each respective metric, such that measure types falling under water, energy, waste, and mobility pillars are given a **weighting of 2**, whilst the horizontal measures are given a **weighting of 4** due to its relative higher importance for supporting the achievement of the strategy's circularity.

On these bases, the Strategy is assigned a total score, which is estimated through the equation below:

$$Total \, Score = \sum_{n=1}^{5} Score_{Principle}$$

Equation 1

Where the score under each principle, encompassing the 5 pillars (water, energy, waste, mobility and horizontal), is estimated as follows:

$$Score_{Principle} \sum_{n=1}^{5} \left(\frac{\sum_{n=1}^{x} W_{Metric} \times R_{Measure\,Type}}{x} \right)$$

Equation 2

Where: W is weighting,

R is rating, and x is the number of proposed measures.

Each Strategy may obtain a maximum score of 24 for each single principle and a maximum total score for the Strategy of 120. The final global score is expressed in percentage terms on the basis of a maximum score of 120. It is also classified in terms of the circular tourism performance classifications as established in Work Package 3, Deliverable 3.5.3 (Sant' Anna School of Advanced Studies, 2020b), as presented in Figure 1.



Figure 1. Circular tourism performance classifications as established by SSSA

Source: INCIRCLE Deliverable 3.5.3: 10 Assessment reports on current state of circular tourism in partner territories, Sant' Anna School of Advanced Studies (2020).



In line with the requirements of the defined Evaluation Framework, the INCIRCLE Strategy measures are evaluated in this assessment by:

- 1. Mapping each measure in the strategy with the measure types in the Evaluation Framework, by associating each Strategy measure with the elements of the measure types,
- 2. Allocating a rating to each measure according to the requirements of the matched measure type and assigning a weight to the rating according to the pillar of the measure, and
- 3. Calculating the score by principle using Equation 2 above, which then feeds into Equation 1 to determine the total score of the strategy.

Based on Equations 1 and 2, as established in the updated Evaluation Framework, the maximum score of 120 can be reached if the strategy proposed at least one measure under every pillar and under every principle. If a strategy proposes a different number of measures under every pillar and thus every principle, the scoring of said principle is calculated according to the number of measures present. This approach reduces the bias in the number of measures for each pillar, where the score is being calculated on the actual number of measures. Furthermore, each Strategy may obtain a maximum score of 40 for the horizontal pillar and a maximum score of 20 for each of the other single pillars (water, energy, waste, and mobility).

Following this approach, each Strategy measure is mapped with the elements of the measure types under the relevant pillar. This means that when evaluating the Strategy measures, the allocation of measures under each pillar within the Synthetic Strategy Summary is questioned to assess whether the measure clearly fits the definition of the pillar. It is understood that there are critical interlinkages between pillars, such that actions of measures under the five INCIRCLE pillars, this Strategy Evaluation identifies the distinct critical need areas that may be addressed by the Strategy measures under each pillar. These are presented in Table 1, which are derived through review of available documentation for the INCIRCLE project, and further desk research.



Table 1. The critical need areas under each INCIRCLE pillar

Source: Based on the author's interpretation of the INCIRCLE pillars. INCIRCLE Deliverable 4.1.2: Collection of assessment reports of regional/national strategies, The Energy and Water Agency (2021a).

Pillar	Relevant areas to be addressed by measures from a demand and supply perspective
Water	Water demand management, optimisation of water use, conservation and regeneration of water supply sources, wastewater reclamation and alternative water production systems
Energy	Energy demand management and optimisation of energy use, diversification of energy supply sources and the development of renewable energy systems to address energy use particularly in buildings, for lighting, air cooling and heating, water heating and cooking purposes
Waste	Reduction of waste generation at source, optimisation of waste separation, reduction of landfilling and recovery of material and energy
Mobility	Development of sustainable transport solutions and the supporting infrastructure, and development of modes of collective transportations systems
Horizontal	Management of the critical interlinkages between pillars and ecosystem services through integrated solutions for cross-cutting issues, including climate mitigation and adaptation, development of integrated policy and protection of natural habitats, amongst others

The Strategy Evaluation derives simplified, but distinct definitions of the five principles based on the definitions in **D3.3.1: INCIRCLE set of circular tourism indicators** (Table 2).

Table 2. Definition of the five INCIRCLE principles

Source: INCIRCLE Deliverable 3.3.1: INCIRCLE set of circular tourism indicators, Sant' Anna School of Advanced Studies (2020).

Principle	Reduce		
Definition	The reduce principle is mainly focused on natural capital. It requires to decision makers, both at the tourism destination and at tourism industries levels, to maximize resource efficiency, resource productivity and resource intensity. The reduce principle promotes a shift toward dematerialization and the use of renewable resources, secondary raw materials and by-products. The achievement of this principle is strongly supported by closed cycles. In addition, industrial symbiosis is a crucial strategy for reduction. The implementation of reduce principle needs a strong stakeholder's engagement. These are actors both directly (i.e. tourism destination's and tourism industries' decision makers) and indirectly (i.e. tourism destination and in the management of tourism industries. So, collaboration among actors and across capitals is a fundamental lever for the fulfilment of the reduce principle. In this perspective, the quality of network in the tourism destination become critical, together with the nature and the strength of ties between stakeholders.		
Principle	Regenerate		
Definition	The implementation of regenerate principle needs the adoption of a holistic and systemic vision in managing in an integrated manner all capitals. Indeed, this principle encompasses all considered capitals (i.e. natural, social, built, human) and finds in the equilibrium among them its fulfilment. Looking at natural capital the regeneration principle requires decision makers at tourism destination level and at tourism industries level to restore environmental assets and to regenerate them. Environmental assets include abiotic factors and flows and ecosystems' assets and services. Restoration means to return something to an earlier good condition. Regeneration means to improve a place or system, especially by making it more active or successful. Looking at the local		



	community by creating a shared value and a shared vision it becomes possible to regenerate individuals and society. Therefore, it supports the human well-being, a sustainable development based on local knowledge and trust, community based and complex governance structures. Regenerate principle asks decision makers to conceive their socio-economic system as an ecological-socio-economic system.
Principle	Rethink
Definition	Rethink principle requires decision makers to dramatically refuse the linear approach, adopting a new way to think about resources management processes across capitals. Design is at the centre of this new way to think, together with the life cycle approach. The implementation of the rethink principle asks integrated and collaborative decisions making processes. The fulfilment of the rethink principle is based on a strong awareness on impacts that decisions determine on resources across capitals, in all phases of the lifecycle of products and services. The awareness on such kind of impacts enhances the adoption of responsible decisions and the increase of the sense of responsibility. The need to be aware about impacts requires the availability of information and adequate information management processes. New technologies, internet of things, traceability, big data, can support the implementation of this principle. Servitization, co-creation, co-management, sharing, mass customization, can drive the new way of thinking.
Principle	Innovate
Definition	The innovate principle requires decision makers to be innovative. Innovation refers to the use of a new idea or method. These kinds of processes are displayed in very different filed of actions, as, for example, technologies, organization management, materials, products, services, operational processes and at social level. Specifically, social innovation refers to new solutions that simultaneously meet a social need and lead to new or improved capabilities and relationships and better use of assets and resources. In this perspective, social innovations are in the meanwhile good for society and enhance society's capacity to act. The fulfilment of this principle is strongly supported by the capacity of change and is based on collaboration between stakeholders and people. Innovation principle interacts with and supports all the other principles of the model.
Principle	Revalue
Definition	Revalue principle refers to the capacity of decision makers to maintain the value of resources and products across different economic cycles. This kind of capacity can be supported by several types of actions, as for example, maintenance and repair, reuse, repurpose, refurbish, remanufacturing, refitting, renovation, recycle, recovery. This principle specifically requires enhancing the overall capacity of cycles to upcycle. Upcycling refers to the reuse in such a way as to create a product of higher quality or value than the original. More specifically, upcycling could be referred to the process of converting secondary raw materials/by-products into new materials, components or products of better quality, improved functionality and/or a higher value. The achievement of this principle is supported by collaboration and integrated management of resources across capitals.

Based on the rationale described above, all the measures provided in the partner's Strategy are evaluated and assigned a score. Measures which fall under any of the below three cases are scored as follows:

1. Where a measure in the strategy is categorised under a pillar which does not meet the needs of the pillar as described in Table 1 above, it is transferred and scored under the relevant pillar. Thus, for simplicity and consistency purposes, a measure is classified under a specific pillar if primarily its objective addresses a need area under that pillar. In terms of the horizontal pillar, measures are expected to be developed in a manner where resources are managed collectively for cross-cutting benefit of the tourism sector.



- 2. Where the same measure is listed under different sections of the same pillar, a score is assigned once if the measure meets the requirements of one type of measure only.
- 3. Where the same measure is listed under multiple pillars including horizontal:
 - a score is firstly assigned under the most relevant pillar in line with the critical need areas identified in Table 1 above, and
 - assigned another score under the horizontal pillar if the measure evidently shows that a holistic approach is being applied for the tourism sector, addressing at least two different pillars (ex. wastenatural habitat, waste-food production, etc).

Furthermore, where the link between the measure objective and the classification of the measure under the INCIRCLE principle/s is not evidently clear, a revised 'principle' classification is suggested according to the definitions provided in Table 2 above. For simplicity and consistency purposes, the classification of measures under principles is conducted according to their primary objective. This classification however does have any impact on the final total score of the Strategy.

A framework matrix is developed to evaluate each of the Strategy measure provided under the five pillars in the Synthetic Strategy Summary Template (**D4.1.1: Evaluation Pack: Strategy Evaluation Assessment**), which applies the rationale described above. A matrix for each pillar is produced, providing for each measure a suggested principle, measure type, score, and explanation/justification to the derivation of these results. The five matrices for the 5 different INCIRCLE Strategies are provided in Annex C to Annex G of the **D4.1.2: Collection of assessment reports of regional/national strategies**. The scores obtained through these matrices are then grouped by pillar and by principle to derive the final circularity score for the Strategy.

Finally, **Recommendation and Long-Term Feasibility** for the strategy are devised, which are aimed towards the improvement of the value and effectiveness of the Strategy. Recommendations are developed to address the gaps identified in the strategy and to improve its long-term sustainability and impact by overcoming barriers for long-term success and taking advantage of critical success factors.



4. Evaluation by Strategy

4.1. Albania

Albania is a country in the south-eastern Europe, with an area of 28,748 km², bordered by Montenegro to the northwest, Kosovo to the northeast, North Macedonia to the east, and Greece to the south and southeast. The western side of the country is a coastline to the Adriatic Sea, and the southern side has a coastline onto the Ionian Sea (Kotri, Xhelilaj, & Alite, 2021). In 2018, the tourism flows varied from a peak of 1.5 million visitors arriving in the summer months of July and August, down to around 200,000 visitors per month in the winter months. Between 2012 and 2018, the average number of foreign visitors to Albania averaged at 4.7 million per year, increasing at 12% per annum. These flows continue to add to the Albanian population which in 2018 stood at almost 2.9 million (Kotri, Xhelilaj, & Alite, 2021).

The geographical, cultural, and historical features located across the Albanian coastline, shape the main tourism product offered by the territory, with this resulting in the tourism sector being mainly seasonal in nature (Nordic Trade Association Albania, 2020). Indeed, the sunny beaches across its shore offer the main attraction for coastal tourism. Natural and rural areas in Albania are other sought-after tourist attractions, which offer opportunities for the development of rural tourism, mountain tourism, ecotourism, and outdoor activities. Event and business tourism, albeit, less pronounced, is another type of tourism product existing in Albania. Maritime tourism despite its strong potential for development, is still at its infancy mainly due to a lack of infrastructure to enable the development of the yachting, sailing and cruise line market segments. (Kotri, Xhelilaj, & Alite, 2021).

The country's socio-economic development is hampered, amongst other factors, by poor infrastructure, requiring the infrastructural gaps particularly in water, waste, and transport to be addressed. Notwithstanding, the tourism sector prior to the COVID-19 pandemic, was gaining momentum, as the sector saw a growth in tourist arrivals of around 12% per annum during the period from 2012 to 2018, with a total of 5.93 million foreign visitors visiting the country in 2018. Indeed, the sector is noted as one of the main contributors to the development of the national economy with the direct and indirect contribution of the sector accounting for about 26.2% of the nation's gross domestic product (GDP) (Kotri, Xhelilaj, & Alite, 2021).

The Strategy document notes that the Albanian coastline presents the main sought-after tourist attractions, with the beaches and geographical features across the coast accounting for the main tourism product that is currently offered by Albania. This creates high demand for seasonal coastal tourism, generating a peak of tourist arrivals of around 1.5 million (in 2018) over a population of 2.9 million. Due to Albania's economic reliance on tourism, Albania became extremely vulnerable to the COVID-19 pandemic. However, the sector is expected to recover by 2024, and is expected to continue to grow gradually at around 6% per annum until at least 2030.

The INCIRCLE Strategy presents an overview of the economic state of the country which is characterised by major deficiencies in the development of critical infrastructure capacities, mainly in the water, transport, and waste areas, in turn limiting the extent of economic and social development across all sectors. The existing stateof-play of each INCIRCLE pillar is summarised below:

Water: The water distribution network reaches 80% of Albania's population, despite water resources being abundant and available to cater for the entire population. In terms of the wastewater collection network, only 53% of the population is connected to a wastewater treatment facility, and the situation is further exacerbated as the wastewater plants capacity caters for only 15% of the population.



Mobility: Albania is lacking connectivity to the other continents due to limited airports in the country and a railway which is no longer functioning. With respect to maritime transport the country lacks the necessary infrastructure for the development of the yachting and cruise markets, resulting in Albania losing on opportunities for increasing high-value tourism segments. The field of electro-mobility is still new in Albania, thus, charging infrastructure is still lacking.

Energy: Albania is dependent on hydropower for its electricity generation, which expose it to climate change risks causing prolonged droughts and declining river flows. This calls for a higher need to diversify Albania's energy sources by taking advantage of renewable energy from solar power. Another important concern in Albania's energy sector are electric transmission and distribution losses which remain high at 23% of generation.

Waste: Waste management is characterised by deficient and unsuitable infrastructure for the adequate waste management, which is predominantly based on depositing solid and urban waste to landfills.

Albania has achieved progress, albeit limited, in terms of aligning its policy and legislation with EU acquis. Circular economic policy is reflected in multiple Albanian strategies which incorporate aspects of circularity within their framework. This is noted in various policy documents, including a National Strategy for Sustainable Tourism Development 2019-2023 and other long-term strategies and plans specifically for the different sectors of water, energy, waste, and mobility. Significant efforts, however, are still needed on implementation and enforcement, especially on waste management, water, air quality and climate change.

Notwithstanding this, Albania is benefiting from financial support provided by the EBRD and the EU, which are useful in boosting the competitiveness of the tourism sector in Albania. This support will be beneficial to co-finance tourism-enabling infrastructure, such as roads, water and wastewater improvements and municipal infrastructure upgrades, and to carry out restoration and development projects of cultural and natural heritage sites in the country. Support is also going towards technical assistance and training opportunities, to help improve the local tourism standards, ensure women's participation in Albania's tourism value chain and providing know-how to small and medium-sized enterprises.

From the above context on the overall circular performance of Albania, it may be understood that Albania as a tourism destination is aware of the role of circular economy in the tourism sector as a lever for economic development and for environmental restoration and regeneration. Indeed, Albania is already on a path towards its circular economic development. The main working areas identified for Albania's INCIRCLE strategy is the mitigation of already identified bottlenecks for the development of circular tourism. Additionally, there are opportunities for Albania, as a tourism destination, to increase awareness amongst its population and businesses on important aspects of circularity, which are vital to support an effective circular transition, and thus considered when designing the strategy.

As a result of the context analysis and consultation process, four INCIRCLE Strategy objectives are identified, as follows:

- i. "The transition to a greener, smarter, and more resilient mobility system, by mitigating the negative effects of current transport system in environment, safety, mobility, and biodiversity,
- ii. Facilitate the harnessing of significant renewable energy resources, in particular hydroelectric power plants, and biomass and biofuel resources,



- iii. Environmental management of waste through the prevention and minimisation of waste, and the reduction of negative impacts from waste generation by improving waste management system and resource use efficiency, and by reducing general negative impacts from the use of resources,
- iv. Performance improvement of the efficiency and quality of water supply and sewerage service".

The tables that follow hereunder are the INCIRCLE measures proposed in the Albanian Strategy and categorised by pillar as provided in the Synthetic Strategy Summary.

Table 3. INCIRCLE measures for the water pillar for Albania Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Albania

Measure Section	#	Name of Measure
Measures addressing water use efficiency/water demand management	1	Expanding the network access to safe and quality water supply to the population
	2	Expanding the access of the population connected to the sewerage system
	3	Harmonization of the national legal framework of the water supply and sewerage sector in accordance with EU water directives (WFD, etc.)
Any other relevant measures	1	Increasing the percentage of population connected to a wastewater treatment plant by developing the National Sewage Management Strategy
	2	Planning and financing of priority projects, for investments in the water supply and sewerage sector, in coastal tourist areas

Table 4. INCIRCLE measures for the energy pillar for Albania Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Albania

Measure Section	#	Name of Measure
Measuresaddressing thedevelopment ofrenewable energysystems	1	Establishing a dedicated renewable energy agency
	2	Developing a heat bylaw and related encompassing framework
	3	Raising public awareness on the benefits of renewable energy
	4	Strengthening support mechanisms for renewable energy deployment
Measures addressing heating and cooling optimization in tourism establishments	1	Developing a heat bylaw and related encompassing framework



Table 5. INCIRCLE measures for the waste pillar for Albania Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Albania

Measure Section	#	Name of Measure
ihe e ng	1	Update the Law on Integrated Waste Management in Albania
fressing of wast id recycl ices	2	Development of completed local plans on integrated waste management and municipal regulations by all municipalities, and their approvals in Municipal Councils
Measures add optimization separation an practi	3	Drafting a Package Waste Management Plan and a waste prevention program in support of the implementation of the Strategic Policy Paper on Integrated Waste Management and Action Plan
	4	Organizing annual "Let's do It" awareness campaigns that promote environmentally responsible behaviours for waste reduction, reuse and recycling
Measures addressing the increased reduction of waste at source	1	Update the Law on Integrated Waste Management in Albania
	2	Development of completed local plans on integrated waste management and municipal regulations by all municipalities, and their approvals in Municipal Councils
	3	Drafting a Package Waste Management Plan and a waste prevention program in support of the implementation of the Strategic Policy Paper on Integrated Waste Management and Action Plan
	4	Drafting and Implementing the Application of "Green Procurement" in Albania*
Any other relevant measures	1	Establishment of a system for documenting, informing and performing statistics on waste generation, transfer and treatment at national and local level

* Measure is considered to be better allocated under the Horizontal pillar given that it is wider in scope.

Table 6. INCIRCLE measures for the mobility pillar for Albania Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Albania

Measure Section	#	Name of Measure
Measures promoting the development of sustainable transport solutions	1	The extension of the promenades and the bicycle lanes connecting Albanian tourist centres and the beaches as well as within cities centre and attractions spots
	2	Build up the legal framework conditions regarding the installation of private and public charging points for electric vehicles
	3	Develop and implement the plan for the charging station infrastructure network in long- term including installation of fast charging stations in main routes in Albania
	4	Public awareness measures to enlarge the knowledge about electric vehicles and their benefits. Proposals for national and local incentives (financial and non-financial) to encourage circular mobility that should serve to promote wider uptake of electric vehicles
ssures bting the opment of cructure ired to stain	1	The extension of the promenades and the bicycle lanes connecting Albanian tourist centres and the beaches as well as within cities centre and attractions spots
Me: promo devel infras requ su	2	Build up the legal framework conditions regarding the installation of private and public charging points for electric vehicles



Measure Section	#	Name of Measure
	3	Develop and implement the plan for the charging station infrastructure network in long- term including installation of fast charging stations in main routes in Albania

Table 7. INCIRCLE measures for the horizontal pillar for Albania Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Albania

Measure Section	#	Name of Measure
ach linking the CLE pillars	1	Build up the legal framework conditions regarding the installation of private and public charging points for electric vehicles
	2	Develop and implement the plan for the charging station infrastructure network in long- term including installation of fast charging stations in main routes in Albania
is appro ur INCIR	3	Establishing a dedicated renewable energy agency
A Nexu foi	4	Drafting and Implementing the Application of "Green Procurement" in Albania
atural Ig	1	The extension of the promenades and the bicycle lanes connecting Albanian tourist centres and the beaches as well as within cities centre and attractions spots
n with n roundin ies	2	Strengthening support mechanisms for renewable energy development
tourism the sur mmunit	3	Drafting and Implementing the Application of "Green Procurement" in Albania
ation of eas and cor	4	Organizing annual "Let's do It" awareness campaigns that promote environmentally responsible behaviours for waste reduction, reuse and recycling
Integr	5	Planning and financing of priority projects, for investments in the water supply and sewerage sector, in coastal tourist areas
ach	1	Public awareness measures to enlarge the knowledge about electric vehicles and their benefits. Proposals for national and local incentives (financial and non-financial) to encourage circular mobility that should serve to promote wider uptake of electric vehicles
d Outre	2	Raising public awareness on the benefits of renewable energy
tion an	3	Update the Law on Integrated Waste Management in Albania
Consultat	4	Drafting a Package Waste Management Plan and a waste prevention program in support of the implementation of the Strategic Policy Paper on Integrated Waste Management and Action Plan
	5	Drafting and Implementing the Application of "Green Procurement" in Albania
ch and ation	1	The extension of the promenades and the bicycle lanes connecting Albanian tourist centres and the beaches as well as within cities centre and attractions spots
Resear	2	Public awareness measures to enlarge the knowledge about electric vehicles and their benefits. Proposals for national and local incentives (financial and non-financial) to



Measure Section	#	Name of Measure
		encourage circular mobility that should serve to promote wider uptake of electric vehicles
	3	Developing a heat bylaw and related encompassing framework
	4	Strengthening support mechanisms for renewable energy development
	5	Planning and financing of priority projects, for investments in the water supply and sewerage sector, in coastal tourist areas
Comprehensive policy making	1	The extension of the promenades and the bicycle lanes connecting Albanian tourist centres and the beaches as well as within cities centre and attractions spots
	2	Developing a heat bylaw and related encompassing framework
	3	Strengthening support mechanisms for renewable energy deployment
	4	Organizing annual "Let's do It" awareness campaigns that promote environmentally responsible behaviours for waste reduction, reuse and recycling
	5	Planning and financing of priority projects, for investments in the water supply and sewerage sector, in coastal tourist areas

4.1.1. Strategy results - Albania

The **gap analysis** identifies several issues in the Strategy, including that some measures were not specific to the tourism sector but applies to the entire economy making it difficult to assess their direct contribution to the tourism sector. It was also noted that the proposed measures focus on a limited number of principles, thus other principles such as the innovation aspect, is not well developed. Stakeholder engagement and improvement in governance processes need also to be emphasised.

The total of 22 measures are expected to cost the country a total of €1.28 billion, of which a high share of 97% of the cost is attributed to measures under the water pillar for major infrastructural investments related to priority projects.

Thus, whilst it is appreciated that this infrastructure is needed for the general economic and social development, which would enable the strengthening of the tourism sector, it is however, highly necessary that strategies and plans which are proposed for the entire economy, are reflected into plans and actions specifically designed for the tourism sector. This would ensure that the development of the sector and use of resources for its activities are adequately planned and managed to meet the requirements of a circular economy.

By focusing on the measures proposed in the Albanian Strategy, as presented in Figure 2, the circularity score is calculated at **38.3 out of a maximum possible score of 120 (32%), categorising the Strategy as "Highly Concerned", according to the SSSA classification** (Sant' Anna School of Advanced Studies, 2020b). The strategy is the strongest in measures related to the reduce and regenerate principles, but weakest in the rethink, revalue and innovate principles. The Strategy gains a score under every pillar, with scores being relatively evenly distributed across the five pillars. The highest score is registered for the waste pillar at 9.3, whilst the other pillars gain a score between 5 and 8.



Figure 2. Circularity score of the Strategy for Albania

Source: Author's estimates, based on information provided in the INCIRCLE Strategy



4.2. Balearic Islands

The Balearic Islands consist of an archipelago off the coast of Spain comprised of four main islands, namely Mallorca, Ibiza, Menorca, and Formentera, together holding a population of 1.22 million. In 2019 a total of 16.45 million tourists visited the islands, generating a gross value added (GVA) equivalent to almost 49% of the total region's GDP. Furthermore, for the past ten years, the region of the Balearic Islands has ranked seventh in Spain in terms of GDP per capita (AETIB & Planeting, 2021).



In view of the dependence of the economy on the tourism sector, the aspect of seasonality poses a great threat to the Islands. The tourism sector is facing major socio-economic and environmental challenges resulting from the high concentrated influx of tourists that can be further exacerbated if the number of tourists and residents continue to increase. The high consumption patterns generated by the tourism sector resulting from lack of adequate planning are causing increased stresses on the already limited natural resources and further environmental deterioration (AETIB & Planeting, 2021).

The INCIRCLE Strategy for the Balearic Islands notes that in 2019, a total of 16.45 million tourists visited the Islands. The significant activity in the tourism sector contributes strongly to the general social and economic development of the region, such that the tourism industry is noted to have contributed to 48.8% of the total region's GDP in 2019. The sector employs around 150,000 persons, making up 23% of total employment in the islands. The threat posed by the Covid-19 pandemic, led to a 27% loss in GDP for 2020. However, latest surveys show that tourism activity is expected to recover to pre-pandemic levels between 2022 to 2024.

The existing state-of-play of each INCIRCLE pillar is summarised below:

Water: Water production is extensively dependent on the use of groundwater. Despite the limited natural water resources, the water network is functioning well below an optimal level with water losses estimated at around 26% of total water production. Consumption of water is highly pronounced in tourist accommodations and in golf courses. Treated wastewater is used for irrigation, however, its use is not sufficiently extensive.

Waste: The Balearic Islands is the region that generates the most waste per capita in Spain. During the summer season the production of waste almost doubles compared to winter months. Recycling of waste is yet relatively low, as the largest majority of waste is diverted to incineration plants.

Energy: Fossil fuels are currently the dominant energy sources in the Balearic Islands, as the percentage of energy produced from renewable resources stood at around 5% in 2019, underlining the need for additional improvement in the following years.

Mobility: The sector is characterised by high utilisation of rented cars by tourists which exacerbates the already high dependence by residents on the use of private cars. This situation leads to external costs caused by congestion and noise pollution, increased risk of accidents, high energy consumption and polluting emissions, among others.

The Balearic Islands have recently approved several laws, sectoral plans and strategies covering the circular economy, sustainable tourism and the four INCIRCLE pillars with the objective to advance towards sustainability and a circular economy. This is reflected in the Spanish Circular Economy Strategy which establishes a series of targets to set Spain in line with the European Green Deal and the 2030 Agenda for Sustainable Development, and the Balearic Islands Tourism Law together with the new Comprehensive Tourism Plan 2015-2025, which aim to implement and develop responsible tourism. Other strategies relating to the four pillars include the Energy Transition and Climate Change Law and the Climate Change Strategy 2013-2020, the Waste Law, the Hydrological Plan 2015-2021, the Mobility Law 10/2019, and the Sectorial Master Plan for Mobility.

As shown through the context analysis, the Balearic Islands have recently approved several laws, sectoral plans and strategies covering the four INCIRCLE pillars with the objective to advance towards sustainability and a circular economy. Despite of this, the tourism sector is facing major socio-economic and environmental challenges that can be further exacerbated if the number of tourists and residents continue to increase, having



limited resources already under stress. Further measures are obviously needed to move towards sustainability and circularity. Tourism stakeholders must play a key role towards circularity benefiting from a shared circular value creation within the relevant value chains.

The Strategy identifies the vision that defines the long-term goals of the Balearic Islands as "Make the Balearic Islands a circular tourism destination offering the best tourism experience possible while improving the Balearics quality of life". In addition, a vision for each of the four INCIRCLE pillars is identified as follows:

- Water: Attain water circularity by securing water quality and supply, while protecting water sources and the environment,
- **Waste:** Implement a circular waste strategy to close the loop through waste prevention, zero discharge and 100% reuse and recycling,
- **Mobility:** Achieve an accessible, affordable, zero emissions and circular transport for all residents and visitors,
- Energy: Build a 100% renewable and carbon neutral Balearic Islands.

The tables that follow hereunder are the INCIRCLE measures proposed in the Strategy for the Balearic Islands and categorised by pillar as provided in the Synthetic Strategy Summary.

Table 8. INCIRCLE measures for the water pillar for the Balearic Islands Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for the Balearic Islands

Measure Section	#	Name of Measure
Measures addressing water use efficiency/water demand management	1	Elaboration of a "Circular Water Management Plan" based on expected demand and available supply for Balearic Islands
	2	Upgrade-repair freshwater distribution networks in BI by 2030
	3	Develop and implement the policy and legal framework that encourages water saving and circular water management, especially in municipalities
	4	Design and implementation of a "circular water and water saving awareness campaign" among key stakeholders
Measures addressing water reuse and other alternative water production systems	1	Upgrade-repair wastewater treatment plants and infrastructure (sewage & regenerated water) for use of regenerated water
	2	Use of rainwater and grey water in new homes, existing ones, public and private buildings, etc. by 2030



Table 9. INCIRCLE measures for the energy pillar for the Balearic IslandsSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for the Balearic Islands

Measure Section	#	Name of Measure
Measures addressing the optimization of energy use efficiency	1	Improving energy saving and efficiency in existing buildings
asures ssing the pment of ewable / systems	1	Reducing Greenhouse Emissions (GHG) in the transport sector*
Me: addre: develo rene energy	2	Implementation progressively of RES in all buildings and facilities, public and private of renewable energy

* This measure is considered to be better allocated under mobility rather than the energy sector given that the reduction in emissions is driven by the transport sector.

Table 10. INCIRCLE measures for the waste pillar for the Balearic IslandsSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for the Balearic Islands

Measure Section	#	Name of Measure
Measures addressing the optimization of waste separation and recycling practices	1	Increase at least up to 50% of the weight and for each fraction, the preparation for reuse and the joint recycling of materials such as paper, metals, glass, plastic, and bio-waste from domestic and commercial waste, by 2021. This percentage will have to be 65% by 2030
	2	Recycle (material recovery) at least 75% of non-industrial packaging waste by 2030
	3	Reuse of beverage containers in the HORECA (Hotels, restaurants, coffee shops, catering) sector of packaged water, beer containers and refreshing drinks, by 2030
Measures addressing the increased reduction of waste at source	1	Reduce waste generation by 10% before 2021 and 20% before 2030 compared to 2010
	2	Reduce food waste by up to 50% by 2030 (compared to 2020)

Table 11. INCIRCLE measures for the mobility pillar for the Balearic IslandsSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for the Balearic Islands

Measure Section	#	Name of Measure
ures promoting the development of tainable transport solutions	1	Augment the walk mobility from 33 to 42%
	2	Increase the cycling mobility from 2 to 9%
	3	Development and application of mobility plans in touristic areas
	4	Regulation of mobility of rental cars
Meas	5	Development of "Coastal Service Plans"



Measure Section	#	Name of Measure
Measures promoting the development of infrastructure required to sustain improved transport solutions	1	Construction of the tram line "Bay of Palma" in Mallorca

Table 12. INCIRCLE measures for the horizontal pillar for the Balearic IslandsSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for the Balearic Islands

Measure Section	#	Name of Measure
Research and Innovation	1	Promote the Tourism Carrying Capacity Assessment (TCCA) approach as a mandatory analysis for regional tourism planning
prehensive icy making	1	Elaborate a "Circular Economy Law" including revising the current tourism legislation to facilitate the integration of circular economy principles and measures in the tourism sector
Com poli	2	Adoption of recognised sustainable and/or circular criteria for planning public events

4.2.1. Strategy results – Balearic Islands

Through the **gap analysis**, the main gap identified for the Balearic Islands is related to the presentation of the measures themselves. Measures are reported in the form of an objective, but the actions to be undertaken to attain them are not specified. Also, there are instances where the limited number of measures implies that the spread of solutions across the different dimensions of the five pillars are not explored. This is especially important when considering that the number of tourists and residents are expected to continue to increase which implies that more measures are required to ensure sustainability and circularity.

The 23 proposed measures in the Balearic Strategy are expected to cost a total of \leq 341.93 million, of which most of these costs, amounting to \leq 300 million, are for measures under the mobility pillar to construct a tram line².

The circularity score for the Balearic Strategy is calculated at **35 out of a maximum possible score of 120 (29%), categorising the Strategy as "Highly Concerned", according to the SSSA classification** (Sant' Anna School of Advanced Studies, 2020b), as shown in Figure 3. In terms of scores gained under each principle, the highest scores are registered under the Regenerate and Revalue principles, however, the strategy is weak in terms of

² It must be noted that the measure addresses infrastructural development, which will have an impact on the tourism sector, but is not specifically addressing the tourism sector.



the Innovate principle. The Strategy gains a score under every pillar, with scores being relatively evenly distributed across the five different pillars. The water, horizontal and mobility pillars gain the highest scores, whilst the lowest score is registered under for the waste pillar.



Figure 3. Circularity score of the Strategy for the Balearic Islands Source: Author's estimates, based on information provided in the INCIRCLE Strategy



4.3. Crete

Located in the eastern Mediterranean, with 1,000 km of coastline and 300 days of sunshine every year, Crete is the most visited Greek Island. In 2019, out of almost 4.5 million arrivals of foreign visitors, 84% arrived between May and September highlighting the increased pressures that the island faces during the summer months. This pressure bears down on the infrastructure needed particularly in relation to energy, mobility, waste, and water sectors. From an environmental perspective, during the hot and dry months, tourism is heavily dependent on water resources, possibly leading to its depletion in the coming years if proper management is not enforced.

Whilst tourism in Crete has become a leading economic sector, tourism is blamed as one of the culprits of the recent serious environmental and socio-economic problems that threaten the island's sustainability. Most touristic zones are linked to a high concentration of tourism activity, saturation, and overdevelopment, which results into various externalities including noise and air pollution, traffic congestion, reduced road safety, uncontrolled construction, marine pollution, aesthetic problems, and environmental degradation. These impacts are mostly visible and concentrated in coastal zones and tend to attenuate with distance from the coast, reflecting the spatial tourist distribution within Crete. The Strategy lacks information on the existing state of play of each INCIRCLE pillar, and a clear picture on the current situation with regards to water, wastewater, energy, and transport cannot be derived, due to the limited availability of data (for additional information, please refer to Chapter 5.2.3 in **D4.1.2: Collection of assessment reports of regional/national strategies**).

For the **waste pillar**, the Strategy notes that in 2019, the separately collected MSW in Crete amounted to 23.6% of total municipal waste, and around 27% of MSW produced in Crete was prepared for material reuse or recycling, whilst none was treated for energy recovery. It is not indicated how the remaining waste is managed, whether it is landfilled, incinerated or otherwise. However, it is also noted, that MSW management in Greece is still primarily based on landfill disposal, with a landfilling rate standing at 80%.

The Strategy identifies a number of actions being carried out independently from each other across the five INCIRCLE pillars, including a European "WINPOL" program to develop six action plans for the improvement of waste policies and renovation of a mechanical recycling and composting plant. Other actions in the **mobility sector**, shows that a limited number of electric vehicles are available in Crete, including 300 electric bicycles and two buses. In the energy sector, actions to cut **energy consumption** in a limited number of public buildings have recently been undertaken. With regards to the **water sector**, programmes are being designed to monitor and collect data for water consumption in the agricultural sector.

The policy documents referred to in the INCIRCLE Strategy are in reference to Greece as a whole, but none relate specifically to Crete. It must be noted, however, that a National Action Plan on Circular Economy was endorsed by Greece in 2018, with the aim of setting the country on a path towards the long-term adoption of circular principles. This contributes to Greece's economic strategy in its key pursuit to "green" the economy through job creation especially for women and youths, equitable and inclusive growth that is based on efficient resources, SME promotion, innovation, and investment in new technologies, and strengthening of the social-economic potential. Furthermore, core strategic policy documents are currently being revised.

The Cretan INCIRCLE Strategy is addressing the primary need identified in the context analysis which is the lack of awareness and research being undertaken with respect to circular economy. The Strategy thus aims to raise awareness, inform, and engage stakeholders in the pathway towards circular economy, promote sustainable practices, and contribute to the application of the project. This is reflected in the five main proposed measures relating to:



- Building bridges with relevant projects, to accelerate the capitalisation of the knowledge accumulated through sustainable projects,
- Encouraging sustainable synergies among local stakeholders, by creating a database of relevant stakeholders to improve cooperation among tourism industry actors,
- Wide-spreading dissemination of the project objectives and results to create awareness and attracting interest and involvement of a vast range of tourism associations, with the ultimate objective of boosting the usefulness of the project's results,
- Creating a Region of Crete Circular Economy app for visitors and main tourist sector actors to effectively offer a supporting platform,
- Implementation of field trips and workshop for main tourism industry stakeholders, to provide firsthand experience of circular actions already being applied in hotels,
- Improving the destination management by branding Crete as a sustainable destination by investing in customer experience and fostering changes in policies, business practices and consumer behaviour in tourism.

From the context analysis, it is noted that the tourism sector in Crete has become a leading economic sector and its promotion features prominently in recent official development plans for Crete whose overarching goal is the achievement of sustainable development. At the same time, tourism is blamed as one of the culprits of the recent serious environmental and socio-economic problems that threaten the island's sustainability. In view of this scenario, through the stakeholder consultations, the main vision for Crete's INCIRCLE strategy was identified as the **"Formation of a sustainable living through circular economy for the visitors and working environment for the locals employed in tourism"**. The ultimate objective of the project is to allow broad acknowledgement of the project and its results, in essence to raise awareness, inform, engage, promote, and contribute to the application of the project.

Following the strategic visioning process, specific measures are selected, along with indicators to track their performance in achieving the objectives and their capacity to implement the change the strategy seeks to introduce. A strategy implementation time plan and funding plan are drawn up in the Strategy, along with the responsible bodies for measure implementation and monitoring of result indicators. The funding plan includes an extensive review of the possible funding sources such as the Just Transition Fund and other national and regional funding programmes.

The tables that follow hereunder are the INCIRCLE measures proposed in the Cretan Strategy and categorised by pillar as provided in the Synthetic Strategy Summary.

Table 13. INCIRCLE measures for the water pillar for CreteSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Crete

Measure Section	#	Name of Measure
sures addressing water use ficiency/water and management	1	To diversify the water supply in the touristic sector
	2	Water savings systems in accommodation, special tourist facilities and tourist areas (recycling-reuse)
	3	Methods and installations to ensure water adequacy (surface dams - desalination)
Mea ef	4	Integrated water resources management at local regional level



Table 14. INCIRCLE measures for the energy pillar for Crete Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Crete

Measure Section	#	Name of Measure
leasures ressing the mization of iergy use fficiency	1	Energy saving systems (especially during peak periods) in tourist areas
	2	Specifications for new facilities (bioclimatic buildings, materials and technical construction)
M addr optir en	3	Renewable energy sources (sun, geothermal, etc.)

Table 15. INCIRCLE measures for the waste pillar for CreteSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Crete

Measure Section	#	Name of Measure
asures addressing the increased eduction of waste at source	1	On-hands experience through best practices*
	2	Number of bodies cooperating on CE*
	3	Number of duos (hotel-hotel, hotel-transport, restaurant-travel agency etc) *
	4	Number of tourism associations participating (times their members) Number of seminars conducted (2) Amount of material produced (electronic and/or printed) *
	5	Application running*
Mea	6	Policies/ certificates on Crete as sustainable tourism destination*

*All the above measures are in relation to the circularity of the tourism sector; hence they are of a horizontal nature.

No measures are proposed specifically in relation to the four main INCIRCLE pillars.

4.3.1. Strategy results - Crete

In terms of the **gap analysis** conducted for Crete, there appears to be no specific Strategies yet developed for Crete. Therefore, a specific strategy to identify the needs and vision of Crete's tourism industry is considered important. Also, no relevant measures have been provided under certain pillars including water and energy, and those provided under the waste pillar were of a horizontal dimension. A strong strategy needs to be based on quantitative data and the involvement of stakeholders. The lack of quantitative data with respect to the five pillars referred to in the strategy is a gap that need to be addressed to improve the methodology and the development of strong measures to achieve circularity.

Due to the limited number of measures proposed in the Cretan Strategy, the cost of measure implementation adds up to a total of €35,000, which refers to measures proposed for the horizontal pillar only.



The circularity score for the Cretan Strategy is calculated at **12 out of a maximum possible score of 120 (10%), categorising the Strategy as "Beginning Concerned", according to the SSSA classification** (Sant' Anna School of Advanced Studies, 2020b), as presented in Figure 4. In terms of scores gained under each principle, the Cretan Strategy registers equal scores of 4 for the Reduce, Regenerate and Rethink principles each. The Strategy gains no scores for the Innovate and Revalue principles. In terms of scoring by pillar, the Strategy gains a score under the horizontal pillar only, reflecting the weaknesses of the Strategy, which needs to be strengthened by additional measures under each pillar to ensure that the Strategy truly applies a circular approach across all pillars.

Figure 4. Circularity score of the Strategy for Crete Source: Author's estimates, based on information provided in the INCIRCLE Strategy





4.4. Cyprus

Cyprus is a Mediterranean island located in the eastern Mediterranean Sea. It is the third largest and third most populous island in the Mediterranean, with a population of almost 900,000 residents. In 2019, tourist arrivals peaked at 3.9 million up by 39% from 2014 level. A 78% share of this activity is registered in May-October period, with this seasonality in the sector being associated with overutilisation of existing infrastructure, increased pressures on the scarce water and energy resources, sharp increase in waste generation and environmental degradation, whilst the low tourist arrivals during the winter months negatively affects business profitability and employment stability (Balamou, Kosma, & Constantinou, 2021).

The Cypriot tourism product is currently mainly centred around the sandy beaches and clean waters, the Mediterranean climate conditions and cuisine, high quality accommodation and services, and safety of the Island, with this mainly attracting young people and families (Balamou, Kosma, & Constantinou, 2021).

Tourism activity in Cyprus is a significant contributor to the island state's economy, directly generating an estimated share of 16% of the national GDP, which increases to a share of 28% when adding the indirect and induced contribution. As the sector is expected to continue to grow in the next 10-year period, significant economic benefits can potentially materialise, however, the increased tourist arrivals are expected to continue to impinge on the sustainability path of the country, calling for the effective management of the Island's scarce resources and environmental issues (Balamou, Kosma, & Constantinou, 2021).

The existing state-of-play of each INCIRCLE pillar is summarised below:

Water: The Island faces a problem of water scarcity, which is exacerbated by over-abstraction of groundwater and growing water demand, resulting in the depletion of underground aquifers and salination of coastal aquifers. Desalination of seawater and reuse of reclaimed water following wastewater treatment thus are part of the solution practiced in Cyprus to offset part of this problem.

Waste: Cyprus generates a high rate of municipal waste per inhabitant, which is observed to be increasing over the years. In 2016, 76% of MSW was landfilled, whilst only 16% of its MSW was recycled. This situation results from a lack of infrastructure and collection systems for recyclables and for diverting waste away from landfills, lack of coordination between different administrative levels, and lack of incentives to prevent waste generation and increase in recycling.

Mobility: In Cyprus, more than 90% of transport movements is carried out by private vehicles, whilst only 2% of the population use public transport. The use of bicycles is also low reflecting the lack of cycling infrastructure. The country is currently focusing on inducing a modal shift towards public transport through various infrastructural investments and upgrades, including the possible introduction of trains and trams.

Energy: Cyprus has an isolated power system mainly powered by fuel oil. The share of renewable energy in electricity supply remains low at 10% despite the high island's potential to generate energy from solar and wind power. This partly results from the challenge to deliver electricity close to the point of consumption, which is starting to be addressed through energy storage batteries.

The main strategies that influence Cyprus's circular economy are the Tourism Strategy, the National Energy and Climate Plan (NECP), the Waste Management Strategy, the Water Development and Management Plan and the



Transport Policy of Cyprus. The Tourism Strategy sets out strategic priorities until 2030 in relation to the improvement of the tourism experience and the competitiveness of the sector, improving planning and development through better governance and a tourism management framework, attracting new sustainable investment, and increasing the benefits for the local community and the environment. The main policies and strategies in relation to the four main INCIRCLE pillars are addressed in the above-mentioned documents.

The Cypriot Strategy is focused on establishing an image for Cyprus that is an environmentally conscious destination that offers a memorable tourism experience and at the same time improving the quality of life of the Cypriots. This is reflected by four objectives for the four INCIRCLE pillars:

- **Water:** Effective use of water resources in order to secure the quality and protection of water sources and the water environment,
- **Waste:** Implement the waste hierarchy by reducing waste generation, including the changing consumer habits by promoting re-use and recycling, along the principles of the circular economy,
- **Mobility:** Make Cyprus an island with accessible, affordable, and clean transport for all by developing the public transport, designing, and implementing infrastructure for pedestrians and cyclists and through shaping a new culture of less focused on driving,
- Energy: Make Cyprus an Energy Efficient Country by increasing the use of Renewable Energy Sources.

Following the strategic visioning process, specific measures are selected, along with indicators to track their performance in achieving the objectives and their capacity to implement the change the strategy seeks to introduce. A strategy implementation time plan and funding plan are drawn up in the Strategy, along with the responsible bodies for measure implementation and monitoring of result indicators.

The tables that follow hereunder are the INCIRCLE measures proposed in the Cypriot Strategy and categorised by pillar as provided in the Synthetic Strategy Summary.

Table 16. INCIRCLE measures for the water pillar for Cyprus Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Cyprus

Measure Section	#	Name of Measure
Measures addressing water use efficiency/water demand management	1	Construction of recycled water storage tanks in tourist areas of Cyprus to cover the water needs during the high-peak season
Measures addressing water reuse and other alternative water production systems	1	Construction of sewage systems for the management of wastewater in touristic areas
Any other relevant measures	1	Creation of water consciousness for the proper use of water



Table 17. INCIRCLE measures for the energy pillar for CyprusSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Cyprus

Measure Section	#	Name of Measure
sing the ergy use	1	Individual energy efficiency interventions and energy efficiency retrofits in selected tourist related buildings
addres n of ei iciency	2	Energy Efficiency Street Lighting
ures izatio eff	3	Implementation of a Green Tax Reform*
Measu	4	Incentives to buy a of low/zero emission vehicles for the tourism and related to tourism companies. **
Measures addressing the development of renewable energy systems	1	Scheme to encourage tourism sector companies to take measures towards their reduction of greenhouse gas emissions*
Measures addressing heating and cooling optimization in tourism establishments	1	District heating and cooling based on RDF fired cogeneration technologies in tourist areas*

* Considered to be better allocated under the horizontal pillar given that the measure is specific the tourism sector. ** Considered to be better allocated under the mobility pillar given that the measure is specific to the transport sector.

Table 18. INCIRCLE measures for the waste pillar for Cyprus Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Cyprus

Measure Section	#	Name of Measure
Measures addressing the optimization of waste separation and recycling practices	1	Legislation amendment for Mandatory Introduction of Separate disposal by the tourist companies and in general to all sectors of the economy to allow separate collection by the local government
	2	Study on the possibility of utilizing larger quantities and types of tourism related wastes by the tourism companies of Cyprus
	3	Scheme for the tourism enterprises that will invest in the integration of recycled material or related waste in their re-use process
Measures addressing the increased reduction of waste at source	1	Completion of the Network of Green Points



ther ant ıres	1	Creation of a training program on the issues of prevention, separate collection, and utilisation of waste to the tourism sector companies	
Any ot releva measu	2	Creation of a collection and processing waste management data system	

Table 19. INCIRCLE measures for the mobility pillar for CyprusSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Cyprus

Measure Section	#	Name of Measure	
Measures promoting the development of sustainable transport solutions	1	Promote bicycle as a mean of transportation	
moting nent of required proved utions	1	Sustainable Urban Mobility Plans (SUMP) for all cities of Cyprus	
Measures pro the developm infrastructure I to sustain im transport sol	2	Study and implementation of intelligent transport systems and development of a geographical information system and of a public transport infrastructure for all Cyprus	
Measures promoting public transport and shared private transport solutions	1	Study and implementation of intelligent transport systems and development of a geographical information system and of a public transport infrastructure for all Cyprus	

Table 20. INCIRCLE measures for the horizontal pillar for CyprusSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Cyprus

Measure Section	#	Name of Measure	
xus approach cing the four CIRCLE pillars	1	Elaborate the Wise Tourism Index	
	2	Run a visual pollution initiative	
A Né linł INO	3	Foster carbon footprint reduction	



4.4.1. Strategy results - Cyprus

Through the **gap analysis**, which is carried in this evaluation, whilst measures are well balanced across the five pillars, more consideration is needed in terms of strong governance process and the continuous participation of stakeholders throughout the entire process to close the gaps and achieve circularity.

The 21 measures proposed in the Cypriot Strategy are expected to cost a total of €388.9 million, of which a high share goes towards the development of capital infrastructure including almost €270 million for the construction of sewage systems and almost €37 million for the completion of a Green Points Network³.

The total score calculated for the Cypriot Strategy is **44 out of a maximum possible score of 120 (37%), categorising the Strategy as "Beginning Pro-Activist", according to the SSSA classification** (Sant' Anna School of Advanced Studies, 2020b), as shown in Figure 5. In terms of scores gained under each principle, the highest score is registered under the Reduce principle at 16 followed by the Regenerate principle with a score of 8. The Strategy gains a score under all principles, however, is weak in terms of the Revalue principle. The Strategy gains a score under every pillar, ranging from a maximum of 16 recorded under the horizontal pillar, to 8.7 for the waste pillar, and a minimum of 6 for the water and energy pillars.

³ It must be noted that some measures do not specifically address the tourism sector, but which will still be of benefit to the sector.



Figure 5. Circularity score of the Strategy for Cyprus

Source: Author's estimates, based on information provided in the INCIRCLE Strategy





4.5. Malta

The Maltese archipelago, located in the centre of the Mediterranean, constitutes three main islands, namely Malta, Gozo and Comino, which together add up to a total area of 316 km². In 2020, the total population of the Maltese Islands consisted of an estimated 516,000 inhabitants, making it the most densely populated EU Member State. This situation is further exacerbated by the tourism activity, which peaked at around 2.8 million tourist arrivals in 2019 (Attard, 2019).

Although the Maltese Islands are still generally perceived to be as a 'sun and sea' destination, the islands are visited for diverse reasons, including for its culture and heritage, business travelling, scuba diving and learning the English language, which leads to the tourism demand to be more spread across the shoulder months. However, despite efforts to diversify the tourism product, to date, almost two-thirds of tourism activity still occurs during the months of April to September (NSO, 2020).

Tourism is an important contributor to the Maltese economy, generating around 27% of the national GDP. However, this sector is exerting increased pressures on the scarce water resources, increasing the demand for further development in areas which are already facing high urbanisation, causing further stresses on the transport infrastructure, and leading to high levels of waste generation per capita (Attard, 2019).

As the sector is expected to continue to grow in the next 10-year period, potentially attracting 3.2 million tourists by 2030, the impacts of these tourist flows are expected to continue to exert pressures on the scarce water resources, increasing the demand for further development in areas which are already facing high urbanisation, causing further stresses on the transport infrastructure, and leading to high levels of waste generation per capita (Malta Tourism Authority, 2021).

The existing state-of-play of each INCIRCLE pillar is summarised below:

Water: The lack of natural freshwater is the greatest difficulty of the Maltese water sector, with this situation being exacerbated by Malta's high population density, growing number of inhabitants and tourist arrivals and the arid Mediterranean climate. The demand for water is currently addressed through groundwater abstraction, rainwater harvesting, desalination of seawater and wastewater treatment. Moreover, 100% of the population is connected to the drinking water and wastewater networks.

Energy: In 2020, net electricity generation was comprised from natural gas fired plants (74%), supply from imports (17%) and renewable sources (9.4%). The renewable energy is produced from photovoltaic panels, micro wind turbines and combined heat and power plants (NSO, 2021). All citizens in Malta are equipped are connected to a reliable electricity supply.

Waste: In 2018, 82% of municipal waste was landfilled, whilst 4% was prepared to be exported for recycling purposes. Furthermore, the Ecohive Project (ECOHIVE, 2020), is currently underway, and is the largest investment in the waste management sector, driving Malta towards a Circular Economy. The Project foresees a Waste-to-Energy facility (Ecohive Energy), a new material recovery facility (Ecohive recycling), an organic processing plant (Ecohive Organic) and a thermal treatment facility (Ecohive Hygienics). All of this will help to be better aligned with EU waste acquis through a complete overhaul of the waste management system.

Mobility: The public transportation system in Malta is comprehensive, servicing 53 million passengers in a year. Yet, movements across the Islands remain dominated using private vehicles, which are almost all petrol or diesel vehicles, except for a small number of electric, hybrid (electric/petrol & electric/diesel), and LPG/Gas vehicles,



which makes less than a 1% share of the total vehicle fleet. Major investments in road infrastructure are currently being undertaken to upgrade the quality and safety of the Maltese road network.

The Malta Tourism Strategy 2021-2030 is one of the main strategies that influence Malta's circular economy, which is aimed at improving the quality experiences that Malta has to offer. More specific to each pillar, the other important strategies are the 2nd Water Catchment Management Plan for the Malta Water Catchment District 2015-2021, Malta's 2030 National Energy and Climate Plan (NECP), the Long-Term Waste Management Plan 2021-2030 and the National Transport Strategy 2050 and Master Plan 2025. Furthermore, Malta adopted a Low Carbon Development Strategy, which aims to mitigate greenhouse gas emissions thereby reducing its vulnerability to climate change and increasing its adaptive capacity.

The tables that follow hereunder are the INCIRCLE measures proposed in the Maltese Strategy and categorised by pillar as provided in the Synthetic Strategy Summary. A strategy implementation time plan and funding plan are drawn up in the Strategy, along with the responsible bodies for measure implementation and monitoring of result indicators.

Table 21. INCIRCLE measures for the water pillar for MaltaSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Malta

Measure Section	#	Name of Measure		
	1	Promotion of water saving devices to entities within the tourism industry		
r use	2	Training and awareness programs for tourism facility staff on water conservation		
wate ter :ment	3	Incentives for water efficient appliances installed per tourism establishment		
essing cy/wa anage	4	Facilitate the participation of representatives of the tourism sector in water management technology conventions		
s addro fficienc and m	5	Improving awareness of water management in tourism sector through the implementation of quality labels and green certification		
asure: ef dem	6	Promotional campaign relating to improved water management in the tourism sector		
Me	7	Establishment of a centralised technical service for supporting tourism establishments in undertaking/planning water management optimisation initiatives		
sing other er ems	1	Technical support for the identification of alternative water resources within the touristic sector		
ddres and c re wai re syste	2	Promotional schemes for all water alternative resources		
sures a reuse ernativ luctior	3	Support schemes or grants for the installation of greywater/blackwater treatment systems within the touristic sector		
Meas water alte prod	4	Schemes for rehabilitation of new/existing rainwater harvesting systems within tourism enterprises		
Any other relevant measures	1	Establishment of a centralised technical service for supporting tourism establishments in undertaking/planning water management optimisation initiatives		



Table 22. INCIRCLE measures for the energy pillar for MaltaSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Malta

Measure Section	#	Name of Measure	
; the y use	1	Promotion of energy saving technologies/devices applicable to the tourist sector	
dressing of energ ency	2	Support schemes for tourism establishments to invest into Energy Efficient systems/ technologies	
sures ad ization (effici	3	Optimisation of infrastructure of the tourism zone to optimise energy use in public services	
Meas	4	Marketing campaign targeting energy efficiency/ renewable energy in the tourism sector	
g the wable	1	Support schemes for the development of energy storage installations in conjunction with renewable energy sources within tourism premises	
ddressin of rene system	2	Enable the investment of the sector in off-site renewable energy installations which offset energy consumption	
sures ac opment energy	3	Support schemes for the development of renewable energy installations within tourism premises	
Meas develo	4	Marketing campaign targeting energy efficiency/ renewable energy in the tourism sector	
Any other relevant measures	1	Establishment of a centralised technical service for supporting tourism establishments in undertaking/planning energy management optimisation initiatives	

Table 23. INCIRCLE measures for the waste pillar for Malta Source: INCIRCLE D4.1.1 Synthetic Strategy Summary for Malta

Measure Section	# Name of Measure		
s the n of ation ng	1	Development of a waste management plan for tourism areas including the provision of waste management services	
leasure ressing mizatio e separ l recycl ractice	2	Increase in waste separation in tourism public areas	
N add optij waste anc p	3	Marketing campaign addressed at tourism enterprises promotion better waste management and separation practices	
Measures addressing the increased reduction of waste at source	1	Promoting and facilitating local food production activities	
other vant sures	1	Provision of technical support to tourism enterprises for the better planning of the management of their waste streams	
Any c relev meas	2	Provision of technical support to tourism enterprises for increasing awareness on waste management technologies	



Table 24. INCIRCLE measures for the mobility pillar for MaltaSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Malta

Measure Section	#	Name of Measure	
ures ing the oment inable port ions	1	Promoting the provision of alternative mobility solutions services in touristic areas	
Meas promot develo of sust trans solut	2	Promotion of sustainable mobility solutions present within the tourism areas	
Measures promoting the development of infrastructure required to sustain improved transport solutions	1	Installation of EV charging points in all public parking areas	
ting and isport	1	Support schemes for transport operators to increase ride-sharing options	
promo isport te trar ions	2	Continued reassessment of public transport networks to facilitate the integration of the tourism zone within national networks	
sures l ic tran priva solut	3	Promotion of new mobility solutions focusing on ride pooling/sharing	
Mea pub sharec	4	Promotional schemes relating to public transport incentives	
Any other relevant measures	1	Development of a holistic mobility plan for touristic areas which provides specific focus on alternative mobility solutions	

Table 25. INCIRCLE measures for the horizontal pillar for MaltaSource: INCIRCLE D4.1.1 Synthetic Strategy Summary for Malta

Measure Section	#	Name of Measure	
ch s	1	Development of a waste management plan for tourism areas including the provision of waste management services	
approa the fou E pilla	2	Promoting and facilitating local food production activities	
lexus a Iking t CIRCLI	3	Continued reassessment of public transport networks to facilitate the integration of the tourism zone within national networks	
A III III	4	Development of a holistic mobility plan for touristic areas which provides specific focus on alternative mobility solutions	
rism and g	1	Technical support for the identification of alternative water resources	
of tou Il area: oundir unities	2	Support schemes or grants for the installation of greywater/blackwater	
ration natura ie surr commi	3	Establishment of tourism zones as separate water supply zones for leakage monitoring and management	
Integ with th	4	Enable the investment of the sector in off-site renewable energy installations which offset energy consumption	



Measure Section	#	Name of Measure	
	5	Optimisation of infrastructure of the tourism zone to optimise energy use in public services	
	6	Development of a waste management plan for tourism areas including the provision of waste management services	
	7	Increase in waste separation in tourism public areas	
	8	Promoting and facilitating local food production activities	
	9	Development of a holistic mobility plan for touristic areas which provides specific focus on alternative mobility solutions	
	10	Continued reassessment of public transport networks to facilitate the integration of the tourism zone within national networks	
	1	Training and awareness programs for tourism facility staff on water conservation	
ach	2	Facilitate the participation of representatives of the tourism sector in water management technology conventions	
Outre	3	Establishment of a centralised technical service for supporting tourism establishments in undertaking/planning water management optimisation initiatives	
on and	4	Technical support for the identification of alternative water resources within the touristic sector	
sultatic	5	Establishment of a centralised technical service for supporting tourism establishments in undertaking/planning energy management optimisation initiatives	
Cons	6	Provision of technical support to tourism enterprises for the better planning of the management of their waste streams	
	7	Provision of technical support to tourism enterprises for increasing awareness on waste management technologies	
	1	Technical support for the identification of alternative water resources	
ch and ation	2	Facilitate the participation of representatives of the tourism sector in water management technology conventions	
lnnov	3	Establishment of a centralised technical service for supporting tourism establishments in undertaking/planning water management optimisation initiatives	
Ľ.	4	Establishment of a centralised technical service for supporting tourism establishments in undertaking/planning energy management optimisation initiatives	
ensive aking	1	Development of a waste management plan for tourism areas including the provision of waste management services	
Comprehe Policy ma	2	Development of a holistic mobility plan for touristic areas which provides specific focus on alternative mobility solutions	

4.5.1. Strategy results - Malta

The **gap analysis** identifies several issues in the Strategy, noting that the proposed measures focus on a limited number of principles, thus other principles such as the innovation aspect, is not well developed. Stakeholder engagement and improvement in governance processes need also to be emphasised.

The 37 proposed measures in the Maltese Strategy are expected to cost a total of €740,000, the funds being allocated through existing sectoral management plans.



The total score calculated for the Maltese Strategy is **51.6 out of a maximum possible score of 120 (43%), categorising the Strategy as "Beginning Pro-Activist", according to the SSSA classification** (Sant' Anna School of Advanced Studies, 2020b) as presented in Figure 6. In terms of scores gained under each principle, the highest scores are registered under the Reduce and Regenerate principles at 16 and 13.6 respectively, however, the Strategy is weak in terms of the Revalue and Innovate principles, with a score of 6 each. The Strategy gains a score under every pillar, ranging from a maximum of 13 under the water pillar, down to the lowest score of 8 registered under the energy pillar.

Figure 6. Circularity score of the Strategy for Malta Source: Author's estimates, based on information provided in the INCIRCLE Strategy





5. Main Conclusions on the Five INCIRCLE Strategies

5.1. The Main Challenges faced by the Five Partner Territories

The five partner territories suffer from common challenges and weaknesses pertaining to their insular nature, in addition to the effects of remote areas, as they are all located at the periphery of mainland Europe. This generally makes them highly dependent on air and sea transport for their imports and exports needs, including tourism. This situation results in high cost of transport, which impacts on their competitiveness within international markets and significant carbon footprint. Moreover, the tourism sector is an important contributor to the general social and economic development of the five partner territories, which increases their vulnerability to negative shocks in international tourism activity as experienced during the Covid-19 pandemic, which brought the tourism sector to a standstill for several months.

As coastal and marine tourism are the two main tourism products currently offered by the five partner territories, seasonality evidently is the main challenge that they face, generating resource and environmental stresses caused by mass tourism and adverse financial implications, which threatens the livelihood of local communities. Along with this, is a changing demand trend in tourism, shifting towards shorter but more frequent stays, increasing demand for private accommodations as opposed to collective ones, and more personalised vacation planning, which is increasingly done over the internet. This generates a shift in the role of the many stakeholders of the tourism industry, hence a change in their role to facilitate the transition of the tourism sector towards its circularity.

The five territories however are characterised by distinct socio-economic situations which result into specific needs and objectives to enable the tourism sector to move towards a circular and sustainable path. There are strategies which are mainly focused on developing the enabling conditions of a sustainable tourism industry, whilst others which are relatively more advanced in the path to circularity, are more focused on the micro level by providing the tools to tourism operators to improve their operations.

Albania, which is going through the EU accession process, has very limited tourism-enabling infrastructure capacity across all sectors which is crucial not only for the tourism sector, but for general economic development. This is evidenced by the lack of diversification of energy sources, limited water and wastewater networks, the high dependence of waste management on landfilling, absence of direct air connections to other continents and lack of electric mobility charging infrastructure. The Strategy is thus focused on developing the legal framework and strategies to align itself with EU acquis and developing the tourism-enabling infrastructure, to provide the critical requirements to create and enable a strong tourism sector for the creation of productive jobs and for its contribution to the livelihoods of its communities (Kotri, Xhelilaj, & Alite, 2021).

The Balearic Islands, on the other hand, is a highly developed region with its GDP per capita being the seventh highest in Spain. The tourism sector is a main contributor to this favourable economic activity as this sector contributes to almost 50% of the region's GDP. The Islands, however, suffer from negative externalities resulting from tourism sector activity relating to high consumption, which impacts on natural resources, such as water and energy, waste generation which doubles during peak tourism season, and the high utilisation of rented cars by tourists which exacerbates the already high dependence on the use of private cars by residents. The tourism sector is also blamed for a high early school-leaving rate, as young people are enticed to work in the tourism industry for paid jobs. The Strategy approach is therefore focused on diversifying the tourism product and shifting the traditional tourism model to more sustainable practices, with the aim of enhancing the quality of



the tourism product, increase the competitiveness of the sector and reduce seasonality, whilst aiming to improve the quality of life of Balearics (AETIB & Planeting, 2021).

Tourism in the region of **Crete** has become a leading economic sector, however tourism is blamed as one of the culprits of the recent serious environmental and socio-economic problems that threaten the island's sustainability. Most touristic zones are linked to a high concentration of tourism activity, saturation, and overdevelopment, which results into various externalities including noise and air pollution, traffic congestion, reduced road safety, uncontrolled construction, marine pollution, aesthetic problems, and environmental degradation. The INCIRCLE Strategy aims to tackle the lack of awareness on circular and sustainable practices amongst key tourism sector actors, by informing and engaging stakeholders in the country's pathway towards its circularity (Bakinta, Madoulka, & Tikmanidi, 2021).

Cyprus has recently undergone major strategic reforms and infrastructural upgrades, which enabled the tourism industry to grow at record rates leading to unprecedented number of arrivals and revenues. However, almost 80% of the overall tourism activity takes place between May and October, with this strong seasonality in the sector being associated with overutilisation of existing infrastructure, increased pressures on the already scarce water and energy resources, sharp increase in waste generation and environmental degradation, whilst the low tourist arrivals during the winter months negatively affects business profitability and employment stability. The Cypriot Strategy is focused on establishing an enhanced image for Cyprus as a tourism destination that is based on its environmental consciousness and improving the tourism product and the quality of life of the Cypriots (Balamou, Kosma, & Constantinou, 2021).

The Maltese Islands have invested heavily to expand and upgrade the water, energy, waste, and road infrastructure, as well as restoration of cultural and heritage sites. This investment was necessary to meet the growing demands of Malta's population and economy, and the growing tourism activity. However, Malta's main areas of concern relate to the reduction of waste generation and separation, uptake of renewable energy investment, sustainable mobility practices, such that transport remains highly dependent on the use of private passenger cars, and adequate planning of development and of construction projects, which impacts on the island's aesthetics, natural habitat, and biodiversity. Over the past years Malta implemented several measures to diversify its tourism product and this brought a change in tourism trends, such that tourist arrivals have increased in shoulder months improving the financial sustainability of tourism establishments. The Strategy is focused on shifting the practices of tourists and enterprises operating in the tourism industry towards more sustainable and circular behaviour through awareness raising and technical and financial support and the development of plans for the tourism sector (The Energy and Water Agency, 2020).

The descriptions provided in the INCIRCLE Strategies on the current state of circularity show that every partner territory has achieved a level of commitment towards a more circular economy, albeit to different extents. This progress is reiterated in the Circular Assessment Reports on the current state of circular tourism in the partner territories (Sant' Anna School of Advanced Studies, 2020b), showing that the five partner territories have already made progress towards this shift. The performance of the current circularity of the Balearic Islands could not be fully assessed due to missing information. The measures proposed in the INCIRCLE Strategies, which are developed based on the identification of needs, vision, and goals, are therefore building on the progress achieved so far to potentially improve the sustainability of the activities of the tourism sector further.



5.2. Main Results of the Strategies' Evaluation

5.2.1. The Circularity of the Five Strategies

Looking at the **number of measures** (Figure 7) presented by each partner territory, Malta provided the highest number of measures with a total of 37 measures. This is followed by Cyprus which identified 32 measures in total. Albania and the Balearic Islands established a similar number of measures with 22 and 23 measures respectively. Crete presented the least number of measures resulting in only 6 measures.

Malta's measures focused mainly on water, energy, and mobility. Cyprus's measures were mostly related to waste and horizontal pillars with the water pillar having the least measures. Crete's measures were solely focused on the horizontal pillar. The strategy for the Balearic Islands provided measures mostly relating to the mobility pillar followed by the water pillar. The energy and horizontal pillars received the least attention within this strategy with only 2 and 3 measures respectively. Albania has a similar number of measures for each pillar highlighting how their strategy addresses circularity across all the pillars. Most measures targeted the waste pillar with a total of 6 measures followed by the water pillar. The pillar that received the least measures from Albania's strategy was the horizontal pillar with 3 measures.

In general, the water pillar was the most targeted pillar across all strategies followed by the mobility pillar. The horizontal and energy measures equally received the least measures with a total of 15 measures. Circularity scores were calculated for each strategy to assess the degree of circularity, as displayed in Figure 8. Malta received the highest score at 51.6, followed by Cyprus with a score of 44. Albania and the Balearic Islands scored 38.3 and 35 respectively, whilst Crete scored the lowest points with a total of 12 points.



Figure 7. Number of measures in the five INCIRCLE Strategies Source: Author's estimates, based on information provided in the INCIRCLE Strategies







In terms of the circularity scores by principle, the largest majority of measures provided in the strategies are classified under the reduce and regenerate principles, as shown in Figure 9. Generally, the strategies are weak in terms of innovate, revalue, and rethink principles. Cyprus's strategy delivered the best combination of measures under the five principles, achieving its highest score of 16 for the reduce principle and its lowest score of 6 for the revalue principle. Crete did not score any points for the principles of innovate and revalue but scored its highest points of 4 equally for the Reduce, Regenerate and Rethink. Albania scored highest in the reduce principle with a score of 18.3, with this being the highest score gained by principle across all the strategies. On the other hand, Albania is the only partner territory which did not gain a score for the rethink principle. The highest scoring principle for the Balearic Islands was regenerate, for which the Islands attained a score of 14. However, the region lacked measures for the Innovate principle resulting in their lowest score of 2 being attributed to this principle. Malta attained the highest score for the Reduce principle at 16 and gained the highest score across all strategies for the Rethink principle with a score of 10.

In terms of scores by pillar, all countries, register a relatively high score in the horizontal pillar, with the least score for this pillar being registered by Albania at a score of 8 (Figure 9). Albania obtained the highest score of 9.3 for the waste pillar and the lowest score for the mobility pillar at 5. The Balearic Islands registered a relatively low score in all pillars with the lowest score obtained for the waste pillar at 4. Crete obtained a score for the horizontal pillar only, with a score of 12. Cyprus achieved the highest score in the horizontal pillar at 16 followed by the waste pillar. The lowest score was equally obtained for the water and energy pillars at 6. Scores obtained by Malta are better distributed across the five pillars, with the highest score of 13 obtained for the water pillar and the lowest score of 8 obtained for the energy pillar.







5.2.2. Limitations of the Circularity Score and Recommendations

The scoring system developed and adapted from the Strategy Evaluation Framework Report (part of Deliverable 4.1.1) provides a measure of the circularity of the INCIRCLE measures proposed by the five partners of this project. This is evaluated in terms of the five pillars and five principles of a circular economy. However, this Framework, has its limitations in assessing the holistic approach of the Strategy, as it is entirely based on the assessment of measures only. Another limitation arising from the Framework, as noted in the methodological



approach section, includes the fact that the framework does not represent an exhaustive list of all possible circular measures.

Moreover, as also noted in the approach section, the framework is based on a total of 125 measure types, with a high proportion of measure types in the Framework requiring a further complexity to attain a full rating of 2 instead of 1, resulting in a maximum possible score of 120. Through this approach, the Framework sets relatively ambitious requirements for the strategies which require the availability of much more funds and capacity to implement measures and monitor their progress. Whilst the Framework may present a number of limitations, it provides the basis for the quantitative measurement of circularity and has a useful role in highlighting problems and contributing to the process of priority setting, policy formulation and monitoring progress. Also, the developed Framework manages to standardise a complex array of information concerning water, energy, waste, mobility, and cross-cutting issues into a single score. Thus, the developed circularity score provides an important basis for informing the public and policymakers about key problems in the tourism sector and actions required for their management. Whilst the main objective of this evaluation is to determine the circularity score of the five strategies, it must be emphasised that the developed Framework should serve as a means rather than an end for improved decision-making.

It is useful to note that, as reflected by the gap analysis for each strategy, all the Strategy documents need further improvements, not just to increase the circularity of the measures, but also to improve the Strategy as a whole. It is beneficial that when reviewing and updating the strategies, other guidelines may also need to be kept in mind to ensure that the overall policy and planning process is adequate to address the problems of the territory. Within the European Commission's "Better Regulation Guidelines Working Document" (European Commission, 2017) and the OECD's "Applying Evaluation Criteria Thoughtfully" (OECD, 2021), a set of criteria are established, with applicability in design of interventions, strategic planning and in monitoring of strategic results. As a minimum, these guidelines require interventions to be evaluated in terms of their:

- 1. Effectiveness,
- 2. Efficiency,
- 3. Relevance,
- 4. Coherence both internally and with other EU interventions, and
- 5. Achieved added value (European Commission, 2017),
- 6. Whilst the OECD, also adds impact and sustainability as two other criteria (OECD, 2021).

In relation to the European Commission's guidelines (European Commission, 2017), strategy development must ensure that measures are effective in achieving their objectives, are relevant to the needs identified through the strategy development process, and are coherent with regional, national and EU policy. Their efficiency in terms of how well the resources are utilised to obtain the desired outcomes is also be considered, along with the added value achieved at the national, regional, and local levels.

The application of such guidelines would therefore need to be reflected across the overall strategy developed, which as required by the Strategy template (part of **D3.3.1: Operational Model**), the strategy development must follow a process, whereby first the context is identified in terms of relevant existing policy and current state of play of the tourism sector. The latter needs to be explained in terms of the links and impacts of the tourism sector on the resources, environment, and communities. Through this process, supported by stakeholder consultations, the problems encountered within the territory can be identified, thus leading to the identification of specific needs for the territory. Consequently, the strategic vision, and objectives, are thus defined, leading



to the exploration of further possible interventions to address the needs, with the aim of the meeting the defined objectives. Timeframes, budget, and responsible bodies for the implementation of the interventions thus need to be identified, followed by the monitoring framework of result indicators. The elements explored along this process, in fact provide the basis for evaluation of the strategy as required by the Commission guidelines outlined above.

In view of this, it must be noted, that the Cypriot strategy may not have registered the highest circularity score amongst the five strategies. However, it follows the strategy development process in full, which must be commended. It clearly defines the needs, vision, objectives, and targets of the Strategy, and translates these into specific measures which are designed to meet the set objectives. Whilst it has its limitations in terms of the specific design of the measures, the process followed, and the documentation of the Cypriot Strategy are adequately aligned with the necessary requirements.

5.2.3. Duration of Implementation of the Five Strategies

The measures established within the strategies have different implementation periods which are categorised under the short (0-2 years), medium (2-5 years) or long term (5-10 years). As presented in Figure 10, Cyprus' strategy has the most measures that have a short implementation period with 9 measures to be implemented within the short term. More than half of Malta's measures are expected to be implemented over the medium-term period. Lastly, Albania has the most long-term measures with a total of 18 measures.

The strategy of Cyprus has the most equally distributed measures across the years with 9 measures for the short term, and 6 measures for both the medium and long-term periods. The Balearic and Albanian strategies have the highest number of long-term measures, implying that the results of the strategy are likely to start to be enjoyed in the longer term, with only a few measures proposed to derive change in the shorter to medium terms.



Figure 10. Number of INCIRCLE measures by duration of implementation period *Source: Author's estimates, based on information provided in the INCIRCLE Strategies*



5.2.4 Long-Term Feasibility of Strategies

The below recommendations aim to improve the long-term sustainability and impact, whilst aiming to overcome related barriers, and ensure long-term success, taking advantage of critical success factors. To guarantee long term feasibility it is critical that the initial design of the strategy is adequately developed taking into consideration all possible aspects with the involvement of stakeholder also to ensure continuous interest and support. Thus, it is crucial that from the onset, any problems that may arise from strategy implementation are identified to avoid later disruptions. A **good initial design** is crucial to the success of the adoption and implementation of a strategy. For instance, one way to achieve this is by following good practices and techniques that are already proved to be successful. Therefore, it is important that **the design is relevant and appropriate** to achieve its objectives and address the problems it is designed to address. This is what makes a strategy effective. **Effectiveness** is a key criterion which explains the extent to which the strategy contributes to its objectives through achievement of intended results. The success of the many result indicators. Thus, it must be ensured that the responsible bodies appointed to carry out these activities have the necessary capacity to do so and that there are sufficient synergies between the different stakeholders to enable a **coherent approach** for data collection and reporting of information.

Another important aspect is the **efficiency** of the strategy. It must be ensured that that project results have been achieved at reasonable cost, that is how well inputs/means are converted into activities, in terms of their quality, quantity and time of the results achieved. This has an important influence on the **long-term sustainability** of the strategy. The costs for the implementation of each measure need to be adequately estimated through detailed research, to ensure availability of funding throughout measure implementation.

Another important aspect for long-term feasibility is the **impact** of the strategy and its measures. This represents the effectiveness of the measures to contribute to the territorial and sectorial needs and to the wider policy objectives. What is also important here the **coherence** of the strategy and its objectives with existing EU acquis, national, regional, and local frameworks, and action plans. For the strategy to be successful it needs to be aligned with established nations objectives. It cannot be a standalone strategy otherwise it will not feature in the overall vision of the country and its success will be limited. Internal coherence is also important to ensure that the different actions of the strategy work well together, such that the actions of one supports the other rather than the opposite.



6. Conclusions

As evidenced by the findings of the five strategies, the continuation of the 'business as usual' scenario in the tourism sector is neither circular nor sustainable, as the activity within the sector is the cause of environmental and socio-economic problems that sometimes threaten the sustainability of the territories. Mass tourism, and the associated high urbanisation and high consumption patterns, are a few examples of the links between the tourism sector and the wider society, economy, and environment. As the number of tourist arrivals are expected to continue to increase in the medium to long term, impacts of these flows are likely to result in various externalities including increased noise and air pollution, GHG emissions, traffic congestion, over-development, marine pollution, aesthetic problems, and environmental degradation. If this trend remains unchecked, critical tipping points may be reached. The need for long-term, responsible planning and management is thus critical for the industry especially in a post-Covid-19 era.

As shown by the strong interlinkages of the tourism industry with the other sectors of the economy, characterised by its input requirements, as well as its outputs, the sector has an important role to play in the economy's transition to circularity.

The INCIRCLE Strategies for the five partner territories show a level of commitment by all stakeholders involved to shift the operations and activities of the tourism sector towards a more circular path. This is reflected by the preparedness of the territories to date, evidenced by the existence of measures in most of the five territories, and the strategy process itself which managed to bring together the various stakeholders from each partner territory to devise the needs, vision, and goals for the circular tourism sector. This progress must be acknowledged as an important achievement in moving a step forward towards a more circular tourism activity in the Mediterranean Sea region.

The level of commitment towards the circularity goals vary from one territory to another, ranging from a classification of "Beginning Concerned" for Crete, to "Highly Concerned" for Albania and the Balearic Islands, to the highest classification obtained of "Beginning Pro-Activist" for Cyprus and Malta. These classifications, reflecting the score obtained from the Strategy measures, should be considered to continue improving the sustainability of the activities within the tourism sector. This process needs to be supported, facilitated, and enabled by the many actors of the sector, which thus need to be kept engaged in the planning and implementation processes for the benefit of the entire society. In conclusion, the success of the strategy is dependent, amongst other factors, on the effectiveness of its design, implementation, monitoring, and enforcement activities of the many result indicators. Thus, it must be ensured that the responsible bodies appointed to carry out these activities are involved from early stages of the strategy design, to ensure stakeholder ownership, and that there is sufficient absorptive capacity, political will, and national resource availability to take the strategy forward.



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Annex A: List of Measure Types identified in the Evaluation Framework (D4.1.1) grouped by Pillar

	<u>Water Pillar</u>	
#	Measure Type	Measure Rating
1	Legislative Instruments -water use efficiency and adoption of water use efficiency technologies	0 = None 2 = Measure present
2	Positive financial Incentives - infrastructure improvement or - adopting water efficient technologies	0 = None 1 = Single measure type 2 = Both measure types
3	Negative Financial Incentives - to minimise water consumption or - to trigger investment in new technologies	0 = None 1 = Single measure type 2 = Both measure types
4	Awareness/ engagement initiatives - water awareness campaign tackling general population or - targeting specifically the tourism sector as a whole or - targeting tourism operators	0 = None 1 = Single measure type (any one measure of the three options) 2 = Both measure types (targeting tourism sector and tourism operators)
5	Voluntary Codes or Voluntary Performance Benchmarks - voluntary codes or - voluntary performance benchmarks	0 = None 2 = Measure present (if voluntary code or/and benchmarks)
6	Incentives for the development of non-conventional water resources (NCWR) in tourism entities	0 = None 1 = Single measure type (one type of NCWR) 2 = Measure present (more than one type of NCWR)
7	Incentives for improved water demand management (WDM) - promote WDM at either facility or user level	0 = None 1 = Single measure type 2 = Both measure types (at both facility and user levels)
8	Incentives for the recycling of wastewaters - financial or non-monetary incentives to recycle wastewaters	0 = None 1 = Single measure type 2 = Both measure types
9	Incentives for the reuse of greywaters - financial or non-monetary incentives to reuse greywaters	0 = None 1 = Single measure type 2 = Both measure types
10	Technical support for improving water operations - technical support on capacity building or infrastructural aspects	0 = None 1 = Single measure type 2 = Both measure types
11	Consultation with stakeholders from water sector - financial or technical incentives to encourage consultation between public and private stakeholders	0 = None 1 = Single measure type 2 = Both measure types
12	Follow-up consultation with stakeholders from the public and private sector - financial or technical incentives to encourage consultation for post-strategy adoption	0 = None 1 = Single measure type 2 = Both measure types
13	Identifies threats of tourism on other water using sectors - financial incentives for research programmes addressing threats from tourism or incentives for technical support	0 = None 1 = Single measure type 2 = Both measure types
14	Outreach programmes to outline use of water by the tourism sector - promotion through educational campaigns/ materials or incentives for technical support/ workshops	0 = None 1 = Single measure type 2 = Both measure types



15	Promotes provision of reclaimed water to other sectors - promoted the provision of reclaimed water by other sectors	0 = None 2 = Measure present
16	Promotes increased data acquisition to better identify challenges - promote data acquisition at entity level or regional level	0 = None 1 = Single measure type 2 = Both measure types
17	Identifies R & I challenges of the tourism sector - Incentives to identify R & I challenges for the tourism sector	0 = None 2 = Measure present
18	Promotes the participation of the tourism sector in R & I programmes - promotion through marketing/ reach out campaigns or - by incentivising participation	0 = None 1 = Single measure type 2 = Both measure types
19	Facilitates the participation of tourism operators in sectoral conferences - incentives or - an information platform	0 = None 1 = Single measure type 2 = Both measure types
20	Promotes the market entry of innovative technologies - communication measures or campaigns/marketing	0 = None 1 = Single measure type 2 = Both measure types
21	Water auditing to identify opportunities for NCWR use	0 = None 1 = Single measure type (support for external auditing) 2 = Both measure types (support for internal auditing facilities)
22	Support schemes for "normal" retrofitting works - support schemes for either "normal" or "deep" retrofitting works	0 = None 2 = Measure present
23	Establishes a comprehensive Water Management Plan	0 = None 1 = Single measure type (comprehensive water management plan is in the development process) 2 = Both measure types (comprehensive water management plan has already been established)
24	Establishes voluntary benchmarks for NCWR - presence of benchmarking for NCWR	0 = None 2 = Measure present
25	Includes benchmarks in Quality labels for the sector - presence of benchmarking in Quality labels in the sector	0 = None 2 = Measure present



Energy Pillar # **Measure Rating Measure Type** Legislative Instruments 0 = None1 - adoption of energy efficient technologies 2 = Measure present **Positive financial Incentives** 0 = None2 - to encourage minimised energy usage or 1 = Single measure type -to trigger investment in new technologies 2 = Both measure types Negative Financial Incentives 1 = None - encourage minimised energy usage or 3 1 = Single measure type - to trigger investment in new technologies 2 = Both measure types Awareness/ engagement initiatives 0 = None- energy awareness campaign tackling the general 1 = Single measure type 4 population or specifically targeting the tourism sector, or 2 = Both measure types (campaigns and other those targeting tourism operators or the presence of initiatives) energy audits or help desks Voluntary Codes or Voluntary Performance Benchmarks 0 = None 5 -voluntary codes or - voluntary performance benchmarks 2 = Measure present Promotes adoption of EE Technologies 0 = None- presence of financial incentives or 1 = Single measure type 6 - promotional schemes 2 = Both measure types Promotes installation of Renewable Energy Technologies 0 = None- monetary incentives or 7 1 = Single measure type - technical guidance for installation of renewable energy 2 = Both measure types technologies Promotes installation of Energy Storage Facilities 0 = None- incentives for the design of integrated storage or 8 1 = Single measure type - for installations are offered 2 = Both measure types Promotes combined use of heat and energy 0 = None9 - financial incentives or 1 = Single measure type - technical guidance for the use of CHP 2 = Both measure types Promotes adoption of BMS 0 = None- presence of promotional incentives or 10 1 = Single measure type - financial incentives 2 = Both measure types Based on consultation with stakeholders from the energy 0 = Nonesector 1 = Single measure type 11 - financial or technical incentives to encourage 2 = Both measure types consultation Outreach programmes to outline use of energy by the 0 = None tourism sector 12 1 = Single measure type - promotion through educational campaigns/ materials or 2 = Both measure types incentives for technical support/workshops Identifies threats of tourism on the energy demand of 0 = Noneother sectors 13 1 = Single measure type - financial incentives for research programmes addressing 2 = Both measure types threats from tourism or incentives for technical support Encourages research into energy consumption characteristics 0 = None14 - incentivising the use of energy monitoring/managing 1 = Single measure type technologies or 2 = Both measure types - offering technical support though energy auditing Integrates energy resourcing with surrounding community 0 = None15 - financial incentives or 1 = Single measure type - technical support 2 = Both measure types



16	Promotes increased data acquisition to better identify challenges - promote data acquisition at entity level or - at regional level	0 = None 1 = Single measure type 2 = Both measure types
17	Identifies R & I challenges of the tourism sector - R & I challenges for the tourism sector have been identified	0 = None 2 = Measure present
18	Promotes the participation of the tourism sector in R & I programmes - promotion through marketing/ reach out campaigns or - by incentivising participation	0 = None 1 = Single measure type 2 = Both measure types
19	Facilitates the participation of tourism operators in sectoral conferences - incentives or - an information platform	0 = None 1 = Single measure type 2 = Both measure types
20	Promotes the market entry of innovative technologies - communication measures or campaigns/marketing	0 = None 1 = Single measure type 2 = Both measure types
21	Energy auditing to identify key optimisation actions	0 = None 1 = Single measure type (support of external auditing) 2 = Both measure types (support for internal auditing facilities)
22	Support schemes for "normal" retrofitting works - support schemes for either "normal" or "deep" retrofitting works	0 = None 2 = Measure present
23	Establishes a Comprehensive Energy Development Plan	0 = None 1 = Single measure type (comprehensive energy development plan is in the development process) 2 = Both measure types (comprehensive energy development plan has already been established)
24	Establishes voluntary benchmarks for alternative energy solutions - presence of benchmarking for alternative energy solutions	0 = None 2 = Measure present
25	Includes benchmarks in Quality labels for the sector - presence of benchmarking in Quality labels in the sector	0 = None 2 = Measure present



#	Measure Type	Measure Rating	
1	Legislative Instruments	0 = None	
_	- legislative instruments dealing with waste separation	2 = Measure present	
2	- infrastructural improvement or	0 = NORe 1 = Single measure type	
~	- for adopting waste separation practices	2 = Both measure types	
	Negative financial incentives	0 = None	
3	- minimising waste generation or - for waste separation	1 = Single measure type	
	Awaraness/	2 = Both measure types	
	engagement initiatives	0 = None	
4	- campaigns addressing waste separation, targeting the	1 = Single measure type	
	general population or for targeting the tourism sector (as a	tourism sector and tourism operators)	
	whole) or targeting tourism operators		
5	 voluntary codes or voluntary performance benchmarks voluntary codes and benchmarks are present 	v = None 2 = Measure present	
	Promotes waste reduction/minimising yearly tonnage to		
6	landfill	U = NONE 1 = Single measure type	
0	- promotional incentives or	2 = Both measure types	
	- Tinancial incentives Discourages single use products/materials	0 = None	
7	- national/regional measures or	1 = Single measure type	
-	- educational measures focusing on single use products	2 = Both measure types	
	Promotes conversion of bio-degradable WtE	0 = None	
8	- WtE activities or	1 = Single measure type	
	Promotes separation of waste for recvcling	0 = None	
9	- monetary incentives or	1 = Single measure type	
	- technical guidance	2 = Both measure types	
10	Promotes sourcing Zero Km supplies	0 = None	
10	- information dissemination	r = single measure type 2 = Both measure types	
	Based on consultation with stakeholders from the waste	0 = None	
11	management sector	1 = Single measure type	
	- financial or technical incentives to encourage consultation	2 = Both measure types	
	Outreach programmes to outline waste management of	0 = None	
12	- promotion through educational campaigns/ materials or	1 = Single measure type	
	incentives for technical support/workshops	2 = Both measure types	
	Integrates waste management with surrounding community	0 = None	
13	- passive or active measures for integration are offered	1 = Single measure type	
	Identifies threats from tourism related waste on other	2 – both measure types	
14	sectors	0 = None	
14	- measures to help the identification of threats from tourism	2 = Measure present	
	related waste on other sectors		
	of sector	0 = None	
15	- incentivising partnerships between establishments and	1 = Single measure type	
	waste management providers or offering technical support	2 = Both measure types	
	though waste auditing		
16	challenges	0 = None 1 = Single measure type	
10	- promote data acquisition at entity level or regional level	2 = Both measure type	

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17	Identifies R & I challenges of the tourism sector - R & I challenges for the tourism sector have been identified	0 = None 2 = Measure present
18	Promotes the participation of the tourism sector in R & I programmes - promotion through marketing/ reach out campaigns or - by incentivising participation	0 = None 1 = Single measure type 2 = Both measure types
19	Facilitates the participation of tourism operators in sectoral conferences - incentives or - an information platform	0 = None 1 = Single measure type 2 = Both measure types
20	Promotes the market entry of innovative technologies - communication measures or campaigns/marketing	0 = None 1 = Single measure type 2 = Both measure types
21	Waste auditing to identify key optimisation actions	0 = None 1 = Single measure type (support of external auditing) 2 = Both measure types (support for internal auditing facilities)
22	Establishes a Comprehensive Waste Management Plan	0 = None 1 = Single measure type (comprehensive waste management plan is in the development process) 2 = Both measure types (comprehensive waste management plan has already been established)
23	Proposes support schemes for undertaking waste reuse	0 = None 1 = Single measure type (financial support schemes have been considered and will be introduced in the future) 2 = Both measure types (financial support schemes for undertaking waste reuse are already offered)
24	Establishes voluntary benchmarks	0 = None
25	Includes benchmarks in Quality labels for the sector - benchmarking for Quality labels is offered in relation to waste reuse	0 = None 2 = Measure present



Measure Rating Measure Type Legislative Instruments 0 = None 1 - development of sustainable transport solutions in touristic 2 = Measure present areas Financial incentives for Transport Operators 0 = None2 2 = Measure present - for sustainable transport Financial incentives for Customers (Tourists): 0 = None 3 - for use of sustainable transport 2 = Measure present Awareness/ 0 = None engagement initiatives 1 = Single measure type - campaigns tackling the general population or 4 2 = Both measure types (targeting tourism - targeting, specifically, tourism operators or targeting sector and tourism operators) tourists Supports the integration of sustainable mobility services 0 = None - support through capacity building programmes or - support 5 1 = Single measure type schemes 2 = Both measure types Promotes incentives for green transport solutions 0 = None 6 - promotes incentives for green transport solutions 2 = Measure present Promotes development of direct public transport routes 0 = None 7 - promotion through funding or 1 = Single measure type - offering technical guidance 2 = Both measure types Promotes diversification of tourism product 0 = None - (financial or otherwise) or 8 1 = Single measure type - use of promotional material are present 2 = Both measure types Promotes infrastructure for green transport operations 0 = None 9 - financial or technical information regarding infrastructure 1 = Single measure type for green transport operations 2 = Both measure types Promotes infrastructure for cycling and walking 0 = None10 - financial or technical guidance regarding infrastructure for 1 = Single measure type cycling and walking 2 = Both measure types Based on consultation with stakeholders from public 0 = None11 transport sector 1 = Single measure type - financial or technical incentives to encourage consultation 2 = Both measure types Based on consultation with stakeholders from private 0 = None 12 transport sector 1 = Single measure type - financial or technical incentives to encourage consultation 2 = Both measure types Promotes benchmarks for transport services diversification 0 = None 13 - voluntary benchmarks for transport services diversification 1 = Single measure type are present 2 = Both measure types Identifies threats from tourism transport on other sectors 0 = None14 - measures to help the identification of threats from tourism 2 = Measure present related transport on other sectors Promotes increased data acquisition to better identify 0 = None 1 = Single measure type 15 challenges - promote data acquisition at entity level or regional level 2 = Both measure types Identifies R & I challenges of the tourism sector 0 = None 16 - R & I challenges for the tourism sector have been identified 2 = Measure present Promotes the participation of the tourism sector in R & I 0 = None programmes 17 1 = Single measure type - promotion through marketing/ reach out campaigns or 2 = Both measure types - by incentivising participation 0 = None Facilitates the participation of tourism operators in sectoral 18 1 = Single measure type conferences 2 = Both measure types

Mobility Pillar



	- incentives or - an information platform	
19	Promotes the market entry of innovative technologies - communication measures or campaigns/marketing	0 = None 1 = Single measure type 2 = Both measure types
20	Establishes a comprehensive Sustainable Urban Mobility Plan	0 = None 1 = Single measure type (comprehensive plan is in the development process) 2 = Both measure types (comprehensive plan has already been established)
21	Promotional schemes for innovative solutions (pre-market entry) - promotional schemes are offered	0 = None 2 = Measure present
22	Support schemes for greening tourism industry service vehicles - support schemes for greening vehicles of tourism enterprises are offered	0 = None 2 = Measure present
23	Support schemes for greening tourist service vehicles - support schemes are offered for greening of vehicles within transport services to tourists	0 = None 2 = Measure present
24	Retrofitting schemes for tourism vehicles - retrofitting schemes for greening vehicles are offered	0 = None 2 = Measure present
25	Retrofitting schemes for tourism vehicles - retrofitting schemes for greening vehicles are offered	0 = None 2 = Measure present



<u>Horizontal Pillar</u>		
#	Measure Type	Measure Rating
1	Promotes consideration of the Water-Food-Energy Nexus - financial incentives or	0 = None 1 = Single measure type
2	-awareness/engagement initiatives Promotes alternative greener supply resources - promotion through financial incentives or -awareness/engagement initiatives	2 = Both measure types 0 = None 1 = Single measure type 2 = Both measure types
3	Capacity building programmes - capacity building programmes are offered	0 = None 1 = Single measure type 2 = Both measure types
4	Integrates considerations to the virtual carbon footprint - consideration through application of virtual carbon taxes	0 = None 2 = Measure present
5	Promotes innovative tools such as renewable energy certificates - compulsory use of RECs or - promotion through technical support or - financial incentives	0 = None 1 = Single measure type 2 = Both measure types (at least two of the measures)
6	Environmental protection legislation - environmental protection legislation in place	0 = None 2 = Measure present
7	Promotes integrated policy approaches - financial incentives to encourage consultation with stakeholders or - promotion through reach-out programmes	0 = None 1 = Single measure type 2 = Both measure types
8	Protection of natural recreational areas - legislative instruments ensuring effective enforcement or - awareness/engagement initiatives	0 = None 1 = Single measure type 2 = Both measure types
9	Promotes alternative natural facilities - promotion through incentives or promotional material for less frequented natural areas	0 = None 1 = Single measure type 2 = Both measure types
10	Promotes CSR initiatives by sector - incentives (financial or in-kind) or promotional material to encourage CSR initiatives	0 = None 1 = Single measure type 2 = Both measure types
11	National Tourism Policy Forum - incentives for participation within the Forum or - performance-based measures to encourage participation	0 = None 1 = Single measure type 2 = Both measure types
12	Promotes research on tourism impacts on other sectors - research occurs through prior consultation with private stakeholders or the public	0 = None 1 = Single measure type 2 = Both measure types
13	Promotes reach out activities to other sectors and communities - measures to promote trade fairs/conferences or to promote partnerships with local community members/organisations	0 = None 1 = Single measure type 2 = Both measure types
14	Promotes holistic "local development plans" for touristic areas - measures for financial or technical support are offered	0 = None 1 = Single measure type 2 = Both measure types
15	Promotes integrated management plans for touristic areas	 0 = None 1 = Single measure type (local stakeholders are informed of plans/ developments but cannot participate in feedback/discussion sessions) 2 = Both measure types (local stakeholders are informed of and participate in the creation of management plans)



16	Establishes an R&I strategy addressing specific tourism challenges	0 = None 1 = Single measure type (R & I strategy is in the process of formation) 2 = Both measure types (R & I strategy is already in place)
17	Allocates funds for research projects in the tourism industry	0 = None 1 = Single measure type (funds are offered as a one-time measure) 2 = Both measure types (funds are offered regularly)
18	Supports capacity building in the tourism sector - financial incentives or - technical support measures	0 = None 1 = Single measure type 2 = Both measure types
19	Establishes centralised technical support services	0 = None 1 = Single measure type (technical support services are offered but against a fee) 2 = Both measure types (technical support services are available)
20	Promotes conventions on innovative solutions - promotion through hosting of conventions or - incentivising participation/attendance	0 = None 1 = Single measure type 2 = Both measure types
21	Considers actions targeting the upcycling of resources - the presence of framework of actions targeting the upcycling of resources	0 = None 2 = Measure present
22	Promotes the upcycling of resources - promotion does occur	0 = None 2 = Measure present
23	Facilitates capacity building on upcycling within the sector - financial incentives or - technical support measures	0 = None 1 = Single measure type 2 = Both measure types
24	Integrates the tourism sector with regional resource upcycling initiatives	0 = None 1 = Single measure type 2 = Both measure types
25	Financial incentives for entities involved in resources upcycling - financial incentives are offered to entities	0 = None 2 = Measure present



Annex B: Visual representation of the Strategy Evaluation Framework as part of the Evaluation Pack (D4.1.1) and accompanying metrics and measures

