# INCIRCLE

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

Priority axis – Investment Priority – Specific Objective 3-1-1
Priority Axis 3: Protecting and promoting Mediterranean natural & cultural resources
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## D. 4.1.1: INCIRCLE Evaluation Pack – Strategy Evaluation Framework

WP4 : Transferring
Activity 4.1: Assess to improve: evaluation and reception of regional/national strategies
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Final version
10/07/2021

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# List of abbreviations and terms

| | |
|---|---|
| **BMS** | Building Management System |
| **CE** | Circular Economy |
| **CSR** | Corporate Social Responsibility |
| **EE** | Energy Efficiency |
| **EMAS** | EU eco-management and audit scheme |
| **EMF** | Ellen MacArthur Foundation |
| **ETIS** | European Tourism Indicator System |
| **NCWR** | Non-Conventional Water Resources |
| **R** | Rating |
| **R & I** | Research and Innovation |
| **REC** | Renewable Energy Certificates |
| **SSSA** | Sant'Anna School of Advanced Studies |
| **SME** | Small and Medium Enterprise |
| **TOUERM** | Tourism and Environment Reporting Mechanism |
| **UNWTO** | United Nations World Tourism Organisation |
| **W** | Weighting |
| **WDM** | Water Demand Management |
| **WtE** | Waste to Energy |

# 1. Introduction

This document will address the development of the INCIRCLE Evaluation Pack (Deliverable 4.1.1) as part of Work Package 4 (Transferring). The Evaluation Pack is comprised of two separate documents; the current document - Strategy Evaluation Framework Report, and the Synthetic Strategy Summary Template. This deliverable falls under Activity 4.1 "Assess to improve: evaluation and reception of regional/national strategies." The formation of these strategies (Deliverable 3.6.2) is done with the intention of improving the circularity of the tourism destinations tackled in the different partner territories in the INCIRCLE Project. Strategy formation is done with support from the INCIRCLE Operational Model (Deliverable 3.1.1), the INCIRCLE Set of Circular Tourism Indicators (Deliverable 3.3.1), and the Assessment reports on current state of circular tourism in partner territories (Deliverable 3.5.3). Moreover, an in-depth analysis of the tourism area and feedback from the Stakeholder Working Groups (SWGs), held by the Project's partners, further contributed to the strategies' formation. This report offers an evaluation assessment framework, that will be used to test all the created strategies' correspondence to the circular principles set in the INCIRCLE model. The framework utilises different metrics[1] and measures to test the circularity of such proposed strategies. The INCIRCLE Evaluation Pack has the transferability potential to be used and applied to different tourism areas, outside the remit of the INCIRCLE Project.

This report will first recap the INCIRCLE Operational Model and its 5 circular principles, created by AREA Science Park. It will then outline different tourism assessment schemes, tools, and the Circular Tourism Indicators, created by Sant'Anna School of Advanced Studies (SSSA). It will then proceed to explain the created assessment framework and its application. Finally, guidelines on the application of the assessment framework shall be put forward.

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[1] "Metric" is referring to any enabler normative questions which substantially investigate the presence or absence of appropriate measures in the strategy. However, throughout this report, they will be referred to as "metrics".

## 2. INCIRCLE Model

The INCIRCLE approach lays its foundations from the following Circular Economy (CE) principles, as described in the INCIRCLE Operational Model for regional/national strategies on circular tourism (Deliverable 3.1.1):

- Reduce:
  The first principle, identified by the Ellen MacArthur Foundation (EMF), defining a circular model is to design out of waste. Indeed, in such a model the waste does not exist, because considered economic, natural, and social capital, and therefore kept in use for the longest time as possible. This concept contrast with the linear model, where the main economic driver consists in the natural resource use. Instead, in a circular economy model, the main economic driver consists in the 4R: reduce, reuse, recycle, recover. Tourism policies may promote this principle, considering actions where the production of waste is minimised, and the resources use (like water and energy) is optimized.

- Regenerate:
  As mentioned above, circular economy model considers a system in which resources are kept as much as possible in use. The idea introduced by the Ellen McArthur Foundation is that exists two main cycles, technical and biological, though which resources can be reused for what they are designed to. Following the second principle of the EMF, the idea behind this approach is, on one hand, to optimise the resource loop by circulating the products components and materials in both the technical and biological loops by collecting them and replacing them at each level of the reuse, and, on the other hand, trying to dematerialize as much as possible the resources related to tourism by its virtualization (paper, reservation, etc.) This approach levers upon the so-called ReSOLVE framework (regenerate, share, optimise, loop, virtualize, exchange) which synthetizes basically what explained. For this reason, tourism should not be an island in the ocean of other economic activities, but it must be integrated, generating synergies between touristic and local activities.

- Rethink:
  Rethink principle requires decision makers to dramatically refuse the linear approach, adopting a new way to think about resources management processes across capitals. The fulfillment 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. Any ambitious project for a territory cannot success if it is not widely accepted by most of the relevant stakeholders. Hence, it is important to design and implement a process as much inclusive as possible and from the very beginning, to make the stakeholders feel part of it. The mere fact that many elements and stakeholders are affected by circular policies, requires a holistic approach looking to integrate all visions and expectations, to design a useful, resilient, and comprehensive plan. Because of its cross-cutting nature, tourism policies particularly need this type of approach, which may consider all the sectors this phenomenon impacts on.

- Innovate:

  A sustainable and circular policy should look at the years to come, guiding the territories towards a sustainable development. Having a long-term vision is a must because it explicitly and implicitly inspires the single actions. European Commission in December 2019 presented the European Green Deal, a package of measures addressing businesses and citizens to move towards a sustainable development for growth. This is the European vision, which answers to the Paris Agreement, that will inspire the future actions by 2050. Circular local policies should be inspired by this long-term vision, and be strongly innovative, using new idea or method, foreseeing different scenarios, and making room for further local developments.

- Revalue:

  This 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.

# 3. Outline of tourism assessment schemes

The sustainable development of tourism destinations within Europe is of crucial importance in ensuring that social, cultural, economic, and environmental considerations of such areas have all been considered and developed accordingly. This section will outline different tourism assessment schemes that have been used within tourism sectors, however a more in-depth analysis can be found in Deliverable 3.1.1: INCIRCLE Operational Model for regional/national strategies on circular tourism, drafted by Area Science Park. Furthermore, this section will outline the circular tourism indicators, created by SSSA, as part of Deliverable 3.3.1.

The United Nations World Tourism Organization (UNWTO) is responsible for promoting sustainable and accessible tourism. The UNWTO issued a baseline report titled "the Integration of Sustainable Consumption and Production Patterns into Tourism Policies", which found that policymakers are aware of the necessity to develop tourism sustainably (World Tourism Organization and United Nations Environment Programme, 2019). However, the barriers preventing this from occurring, include insufficient tourism environmental governance and the difficulty of translating policies into action. This Evaluation Pack will determine how well these barriers are addressed in the formulated strategies.

There are different tourism assessment schemes and tools that can be used by the tourism sector as a means of mitigating environmental pressures, whilst also aiding in the shift towards a more circular economy. Initiatives such as the EU eco-management and audit scheme (EMAS) was created with the purpose of encouraging tourism operators to improve their environmental performance within the sector. Tourism operators that want to continuously improve and minimise their environmental impact, can follow and apply various best environmental management practices, performance indicators and benchmarks of excellence. Similarly, through the EU Ecolabel, that is voluntary implemented by businesses to show customers (in this case tourists) that the products and/or services being offered have undergone a lifecycle analysis with the scope of minimising their environmental impact.

Developed by the European Environment Agency, the Tourism and Environment Reporting Mechanism (TOUERM) uses policy applicable indicators "to reflect both environmental impacts (baseline and threshold) and sustainability trends at a European scale" (European Commission , 2016, p. 8). The European Tourism Indicator System (ETIS) builds on this, through use of indicators specifically formulated for use in tourism destinations. The function of the ETIS tool is to assess and alleviate the impacts generated by tourism activities on such destinations, through sustainably managing and monitoring of data. It consists of 43 core indicators which can be used by the tourism destination as they see appropriate. The core indicators can be grouped into the following categories: "destination management"; "economic value"; "social and cultural impact" and "environmental impact". The ETIS has supplementary indicators which fall under either; "maritime and coastal tourism"; "accessible tourism" or "transnational cultural routes".

A measurement framework and set of circular tourism indicators have been developed, by SSSA, for the purpose of the INCIRCLE Project (Deliverable 3.3.1). The framework is based on four capitals; natural, social, built, human, and on three levels; micro, meso, and macro. The framework also includes the five principles (Reduce, Regenerate, Rethink, Innovate, Revalue) of the Circular Economy model that represent the objectives that a sustainable and circular tourism should achieve. Through the process of researching and mapping circularity and sustainability indicators, the formation of the Circular Economy Tourism Key Performance Indicators (CET-KPIs) dashboards have been created.

The INCIRCLE model consists of two different dashboards: one addressed to tourism destinations' decision makers (TDDM) and another one addressed to tourism industries' decision makers (TIDM). Since the one addressed to TDDM refers to the macro level of analysis – the tourism destination – the CET-KPIs in the dashboard must cover a wide range of situations (in economic, social, and environmental terms). The dashboard for the micro level focuses on firms in the tourism industry, accommodations, campsites, food services and tour operators and travel agencies. In the light of the variety of indicators included in the dashboards, the INCIRCLE model provides a customizing tool, capable to support the tourism decision-makers in the selection process of adequate CET-KPIs matching with their specific circumstances.

Moreover, in 2019, the MED Sustainable Tourism Community, consisting of a partnership between 18 sustainable tourism projects, funded by INTERREG MED Programme, offered a set of policy recommendations to address the most urgent issues relating to coastal and maritime tourism within the Mediterranean. These recommendations are as follows:

1. Monitor sustainability: where are the knowledge gaps in tourism policymaking? What is the best way to bridge the gaps in tourism data?
2. Reduce the environmental, cultural, and social impacts of Mediterranean tourism.
3. Ensure sustainable and responsible economic growth and prosperity in the Mediterranean through tourism. What is the best way to address the complexity of the tourism sector, including local actors, decision-makers, and consumers?
4. Establish governance mechanisms that lead the wide variety of stakeholders towards more sustainable and more responsible tourism (MED Sustainable Tourism Community, 2019, p. 3).

The INCIRCLE Project will build upon these policy recommendations and the outcomes of this deliverable can help to contribute to this.

# 4. Description of the Evaluation Framework

As part of the Evaluation Pack, an evaluation framework was generated with the scope of assessing the circularity of the proposed strategies. In addition to this, the framework will have the potential to be used after the completion of the INCIRCLE project, in other tourism destinations within the Mediterranean region.

The framework was developed using indicators, where applicable, from the European Tourism Indicator System (ETIS) and from the INCIRCLE CET-KPI dashboard (Deliverable 3.3.1), developed by SSSA. It is important to mention, that these indicators were developed with the intention of assessing the circularity of a tourism destination, including tourism firms (as mentioned above), rather than of a strategy (or a policy). For these reasons, the indicators needed to be rewritten and reformulated to be applicable for strategy evaluation. The indicators selected for use from the ETIS and those developed by SSSA, can be found in Appendices A and B accordingly.

For each of the 5 INCIRCLE principles (Reduce, Regenerate, Rethink, Innovate and Revalue), there are 4 metrics, each focusing on a different INCIRCLE pillar; water, energy, waste and mobility, whilst a 5th metric takes a horizontal approach for the tourism sector as a whole, based on the specific principle being addressed. Each of the 5 metrics encompasses 5 measures that will aid in the strategy's assessment (visualisation in Fig. 1). Thus, the resulting 125 created measures (elaborated in the following section), were elaborated through careful research into pre-existing measures, assessment schemes and tools (Appendices A and B), relating to the 4 pillars and the tourism sector. A summarised version of the measures and metrics can be found in Appendix C.

Weightings are assigned to each respective metric, in line with its relative importance for supporting the achievement of each INCIRCLE principle. For each of the 5 metrics, every metric is given a **weighting**. The first 4 metrics (water; energy; waste and mobility) are given a weighting of 2, whilst the 5th, horizontal metric is given a weighting of 4. It was decided to put more weighting into each horizontal metric, since it addresses circularity at the tourism sector level, rather than at entity or site level.

Moreover, for each of the 25 metrics, there are a further 5 measures, that will be used to allocate **ratings**. The various measures, question how well the proposed strategies are aligned to the principles of circularity. All the measures (a total of 125) are given a maximum rating of 2, according to if the measures are represented in the strategy or not.

Therefore:

$$\sum Total\ Score = Score_{Reduce} + Score_{Regenerate} + Score_{Rethink} + Score_{Innovate} + Score_{Revalue}$$

$$Score\ Reduce = \frac{\sum_{n=1}^{5}(W_{Metric} \times R_{Measure})}{5}$$

**Where W is weighting, and R is rating**.

The same calculation can be carried out for each of the subsequent INCIRCLE principles; Regenerate, Rethink, Innovate and Revalue.

** The maximum score for a single principle is **24**.

*** The maximum total score for the assessed strategy is **120**

Figure 1 Visual representation of the Strategy Evaluation Framework and accompanying metrics and measures
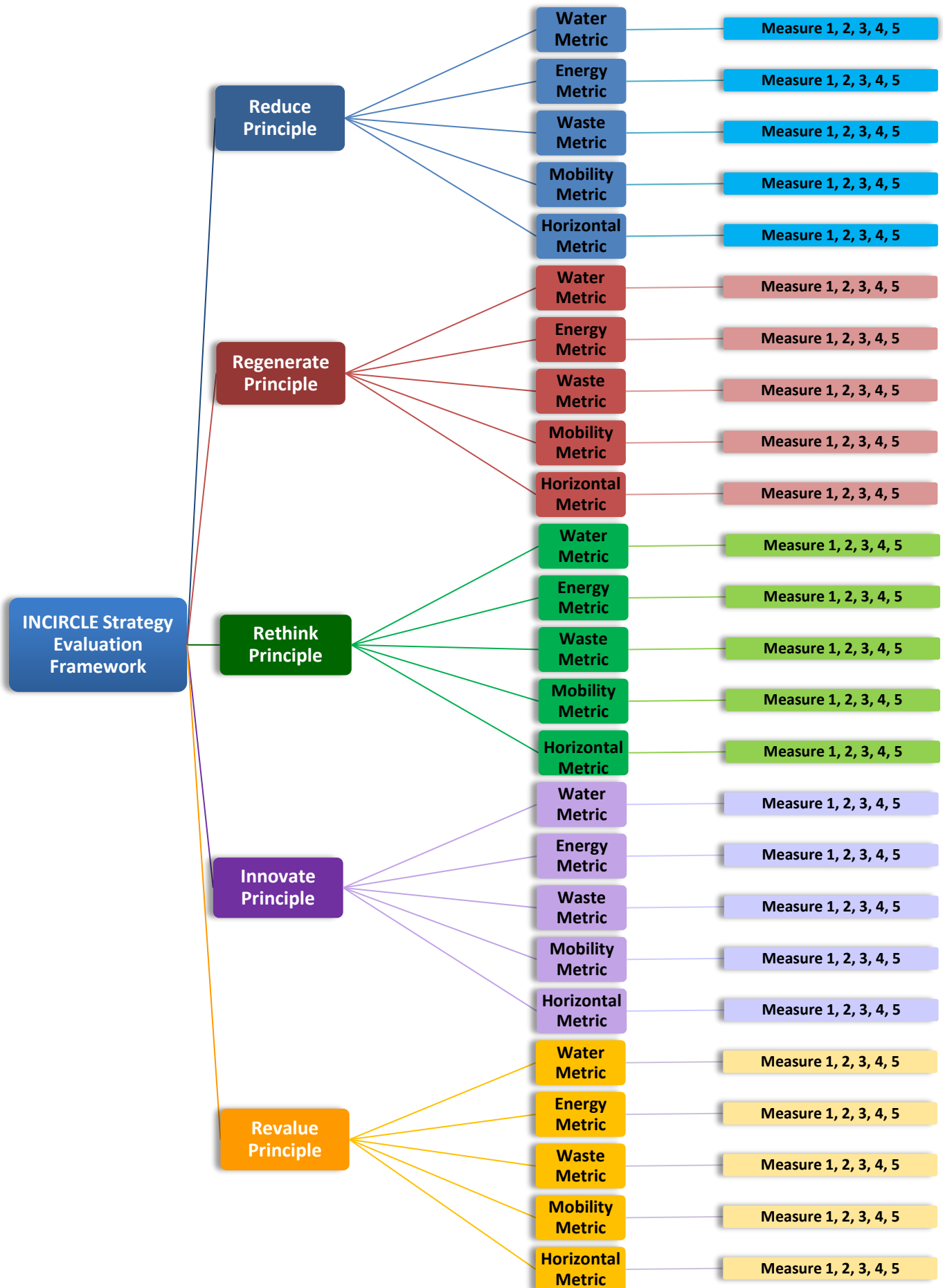
# 5. Guidance for the application of Evaluation Framework

A more in-depth explanation of the metrics and measures making up the evaluation framework to be used in evaluating the proposed strategies, will be covered in this section.

## 5.1. Reduce – Metrics and Measures

**Water Metric: What measure typologies does the strategy include to support enterprises in optimising their water use efficiency?**

- Measure - Legislative instruments:

  - o Referring to any laws, directives, regulations, measures, or rules, specified by government, that are in place within the tourism destination, determining specific standards that must be complied with. In this case, relating to sustainable water management practices. Examples of legislative instruments could be relating to use of 2$^{nd}$ class water and rainwater harvesting, enforced plumbing codes of practice, building regulations affecting water, or use of water efficient technologies and appliances.
  - o Scores should be allocated according to the presence of legislative instruments relating to water use efficiency and regulating the adoption of water use efficiency technologies. A score of zero if no legislative instruments are present or a score of 2 if legislative instruments are present.

- Measure - Positive financial incentives:

  - o A positive financial incentive or monetary benefit can be given in the form of grants, subsides, credits, tax rebates etc, offered accordingly by a competent body. They are used to as a driver to encourage a certain behaviour; in this case related to improving water use efficiency within tourism enterprises. For example, they could be directed towards improving present water related infrastructure (to reduce leakages) or implementing/adopting water efficient technologies.
  - o Scores should be allocated according to the presence of financial incentives. That is, a score of zero is given if no incentives are present, a score of 1 if incentives for infrastructure improvement or for adopting water efficient technologies are present, or a score of 2 for presence of both types of incentives.

- Measure - Negative financial incentives:

  - o The aim of a negative financial incentive is to discourage a certain unwanted behaviour or action and can be in the form of fines, fees, tickets, tariffs, or taxes and are enforced and monitored by a competent body. Such negative incentives can target enterprises to manage and reduce their water use or to invest in new technologies. For example, having a rising water block tariff in place can trigger an improvement in water use efficiency, as a means of keeping costs down.
  - o Scores should be allocated according to the presence of negative financial incentives, meaning that a score of zero is allocated if no negative financial incentives are present. A score of 1, is given for negatives financial incentives to minimise water consumption or to trigger investment in new technologies, whilst a score of 2 is given for the presence of both positive and negative types of incentives.

- Measure – Awareness and engagement initiatives:

  - This type of measure is used with the purpose of bringing awareness to water efficiency and water demand. Initiatives can be in the form of generic environmental awareness campaigns that are addressing the general population or can be more focused to the tourism sector as a whole or to tourism operators specifically. The aim of such initiatives is to reach as many relevant stakeholders as possible and offer information and guidance on how to improve water use efficiency.
    Scores should be allocated according to if awareness/engagement initiatives are present or not. A score of zero is given when no awareness/engagement content is offered, a score of 1 is given if a water awareness campaign tackling general population or targeting specifically the tourism sector as a whole or targeting tourism operators are present, whilst a score of 2 is allocated if both campaign types (targeting tourism sector and tourism operators) are present.

- Measure - Voluntary codes or voluntary performance benchmarks:

  - These are codes of practice that guide behaviour through codes or setting performance benchmarks within organisations/industry. Such codes would provide guidance on the adoption of water efficient technologies in enterprises and tourism areas. The presence of benchmarks would be used to provide a metric against which the adoption of water efficiency technologies can be gauged, like for example when calculating the water consumption per guest within tourism accommodations. Having voluntary codes and voluntary benchmarks in place, pushes environmental proactivity beyond legal requirements. For example, in the case of hotels, the option to set a benchmark for water consumption ($m^3$) per hotel room (bedspace) per hotel rating.
  - Scores should be allocated according to the presence of voluntary codes or voluntary performance benchmarks relating to water use efficiency. A score of zero is given if voluntary codes or benchmarks are not present, and a score of 2 is given if voluntary codes or benchmarks are present.

**Energy Metric: What measure typologies does the strategy include to support enterprises in optimising their energy use efficiency?**

- Measure - Legislative instruments:

  - Referring to any laws, Sustainable Energy Action Plan (SEAP), directives, regulations, measures, or rules specified by government, that are in place within the tourism destination, determining specific standards that must be complied with. In this case, relating to enforced energy efficiency standards within tourism enterprises. Examples of legislative instruments could be relating to use of renewables, energy performance of buildings, or use of energy efficient technologies and appliances.
  - Scores should be allocated according to the presence of legislative instruments regulating the adoption of energy efficient technologies score of zero is allocated if no legislative instruments relating to energy efficiency are present or a score of 2 if legislative instruments are present.

- Measure - Positive financial incentives:

  - A positive financial incentive or monetary benefit can be given in the form of grants, subsides, credits, tax rebates etc, offered accordingly by a competent body. They are used as a driver to

encourage a certain behaviour; in this case related to improving energy efficiency within tourism enterprises. For example, they could be directed towards installing energy efficient technologies.

- o Scores should be allocated according to the presence of positive financial incentives. A score of zero is allocated if no incentives are present, a score of 1 is given if financial incentives are present to encourage minimised energy usage or to trigger investment in new technologies, whilst a score of 2 is given if both types of incentives are present.

- **Measure - Negative financial incentives:**

  - o The aim of a negative financial incentive is to discourage a certain unwanted behaviour or action and can be in the form of fines, fees, tickets, tariffs, or taxes and are enforced and monitored by a competent body. Such negative incentives can target enterprises to manage and reduce their energy use or to invest in new technologies. For example, having an energy tariff in place can trigger an improvement in energy efficiency, as a means of keeping costs down.
  - o Scores should be allocated according to the presence of negative financial incentives. A score of zero is allocated if no incentives are present, a score of 1 is given if financial incentives are present to encourage minimised energy usage or to trigger investment in new technologies, whilst a score of 2 is given if both types of incentives are present.

- **Measure – Awareness and engagement initiatives:**

  - o This type of measure is used with the purpose of bringing awareness to the issue at hand, energy efficiency and energy demand. These initiatives can be in the form of generic environmental awareness campaigns that are addressing the general population or can be more focused to the tourism sector as a whole or to tourism operators specifically. Another initiative could be having energy help desks or the option of energy audits. They aim of such initiatives are to reach as many relevant stakeholders and offer information and guidance on how to improve energy efficiency.
  - o Scores should be allocated according to if awareness/engagement initiatives are present or not. A score of zero is allocated if no awareness/engagement content is offered, a score of 1 is given for the presence of energy awareness campaign tackling the general population or specifically targeting the tourism sector, or those targeting tourism operators or the presence of energy audits or help desks. A score of 2 is allocated for the presence of a campaign and other initiatives (audit and help desks) are present.

- **Measure - Voluntary codes or voluntary performance benchmarks:**

  - o These are codes of practice that guide behaviour through codes or setting performance benchmarks within organisations/industry. Such codes would provide guidance on the adoption of energy efficient technologies in enterprises and tourism areas. The presence of benchmarks would be used to provide a metric against which the adoption of energy efficiency technologies can be gauged, like for example when calculating the energy consumption per guest within tourism accommodations. Having voluntary codes and voluntary benchmarks in place, pushes environmental proactivity beyond legal requirements.
  - o Scores should be allocated according to if voluntary codes or voluntary benchmarks are present or not. A score of zero is given if voluntary codes or benchmarks are not present and a score of 2 is given if voluntary codes and benchmarks are present.

**Waste Metric: What measure typologies does the strategy include to support enterprises in optimising their waste separation practices?**

- Measure - Legislative instruments:

    o Referring to any laws, directives, regulations, measures, rules, or sanctions specified by government, that are in place within the tourism destination, determining specific standards that must be complied with. In this case, relating to enforced waste separation standards within tourism enterprises.

    o Scores should be allocated according to the presence of legislative instruments dealing with waste separation. A score of zero is given if there are no legislative instruments present, whilst a score of 2 is given for the presence of legislative instruments.

- Measure - Positive financial incentives:

    o A positive financial incentive or monetary benefit can be given in the form of grants, subsides, credits, tax rebates etc, offered accordingly by a competent body. They are used to as a driver to encourage a certain behaviour; in this case related to improving waste separation within tourism enterprises. For example, they could be directed towards improving present waste related infrastructure or waste separation practices.

    o Scores should be allocated according to the presence of positive financial incentives. A score of zero is given if there are no incentives present, whilst a score of 1 is given if either an incentive for infrastructural improvement or for adopting waste separation practices is offered. A score of 2 is allocated if incentives are offered for both. is given for the presence of legislative instruments.

- Measure - Negative financial incentives:

    o The aim of a negative financial incentive is to discourage a certain unwanted behaviour or action and can be in the form of fines, fees, tariffs, or taxes and are enforced and monitored by a competent body. Such negative incentives can target enterprises to manage and reduce their waste generation patterns. For example, fining waste producers if they do not separate waste properly.

    o Scores should be allocated according to the presence of positive financial incentives. A score of zero is given if there are no incentives present, whilst a score of 1 is given if either an incentive for minimising waste generation or for waste separation is offered. A score of 2 is allocated if incentives are offered for both.

- Measure – Awareness and engagement initiatives:

    o This type of measure is used with the purpose of bringing awareness to the issue at hand, waste separation. They can be in the form of environmental awareness campaigns or through social media marketing and aim to reach as many relevant stakeholders as possible and offer information and guidance on how to improve waste separation. Awareness/engagement initiatives can also offer information on financial incentives and legislative instruments relative to waste separation, ensuring a holistic approach to addressing the problem.

    o Scores should be allocated according to the presence of awareness/engagement initiatives. A score of zero is given if no awareness/engagement initiatives are offered, whilst a score of 1 is given for the presence of campaigns addressing waste separation, targeting the general population or for targeting the tourism sector (as a whole) or targeting tourism operators. A

score of 2 is given for the presence of campaigns targeting both the tourism sector and tourism operators.

- Measure - Voluntary codes or voluntary performance benchmarks:

  o These are codes of practice that guide behaviour through codes or setting performance benchmarks within organisations/industry. Such codes would provide guidance on waste separation in enterprises and tourism areas. The presence of benchmarks would be used to provide a metric against which the improvement of waste separation can be gauged, like for example when calculating the amount of waste separated per accommodation unit, within tourism accommodations. Having voluntary codes and voluntary benchmarks in place, pushes environmental proactivity beyond legal requirements.

  o Scores should be allocated according to if voluntary codes or voluntary benchmarks are present or not. A score of zero is given if voluntary codes or benchmarks are not present and a score of 2 is given if voluntary codes and benchmarks are present.

**Mobility Metric: What measure typologies does the strategy include to support the development of sustainable transport solutions in touristic areas?**

- Measure - Legislative instruments:

  o Referring to any laws, directives, regulations, measures, rules, or sanctions specified by government, that are in place within the tourism destination, determining specific standards that must be complied with. In this case, relating to the use of sustainable transport solutions in touristic areas, examples include setting up pedestrian only areas, zero-emission zones.

  o Scores should be allocated according to the presence of legislative instruments for the development of sustainable transport solutions in touristic areas. A score of zero is given if no legislative instruments are present, whilst a score of 2 is given if legislative instruments are present.

- Measure - Financial incentives for Transport Operators:

  o A positive financial incentive or monetary benefit can be given in the form of grants, subsides, credits, tax rebates, free tickets, reserved parking for EVs etc, offered accordingly by a competent body. They are used to as a driver to encourage a certain behaviour. These incentives would be used with the scope of encouraging transport operators to take up alternative sustainable mobility options as opposed to more polluting transport types. Ex: transport operators are given a grant if they commit to using electric vehicles.

  o Scores should be allocated according to the presence of financial incentives for transport operators for use of sustainable transport. A score of zero is given if there are no financial incentives offered, whilst a score of 2 is given if financial incentives are present.

- Measure - Financial incentives for Customers (Tourists):

  o Like the incentives offered to transport operators, these incentives would address transport users to encourage sustainable mobility solutions over petrol/diesel vehicles. Ex: Parking tariffs, emission fees, reserved parking and fares for sustainable transport options are subsidised to

incentivise users, or having a system whereby tourists using sustainable mobility options can use those tickets to get further discounts at tourism attractions etc.

- o Scores should be allocated according to the presence of financial incentives for transport customers (tourists) for use of sustainable transport. A score of zero is given if there are no financial incentives offered, whilst a score of 2 is given if financial incentives are present.

- Measure – Awareness and engagement initiatives for sustainable transport solutions:

  - o A crucial barrier to change is a lack of available, reputable information regarding a topic. In the case of sustainable transport solutions, many locals, tourists, and operators may be unaware of the benefits (to them and to the environment) of using such alternative options. Awareness/engagement initiatives would serve as a means of raising awareness through mainstream media and/or social marketing campaigns about alternative sustainable mobility options (as opposed to the mainstream fuel/oil driven vehicles) to tourists and transport operators.

  - o Scores should be allocated according to the presence of awareness/engagement initiatives for use of sustainable transport solutions. A score of zero is given if there are no awareness/engagement initiatives offered, a score of 1 is given according to the presence of campaigns tackling the general population or targeting, specifically, tourism operators or targeting tourists. A score of 2 is given for the presence of both campaign types (targeting tourism operators and tourists).

- Measure - Supports the integration of sustainable mobility services:

  - o Sustainable mobility services include bike pooling, sustainable shuttle, and taxi services, carsharing schemes etc. For the integration of sustainable mobility services to be possible, there must be acceptance for mobility users (operators and customers), to encourage its use and ease its transition into. Is support offered through capacity building programmes for transport operators or through support schemes?

  - o Scores should be allocated according to the presence of support measures for the integration of sustainable mobility services. A score of zero is given if no support measures are present, a score of 1 for the support through capacity building programmes or support schemes and a score of 2 if both measures are present.

**Horizontal Metric: How does the strategy promote the reduction of the carbon footprint of Small and Medium Tourism Enterprises (SMEs)?**

**Horizontal**

- Measure - Promotes consideration of the Water-Food-Energy Nexus:

  - o The water-food-energy nexus is crucial for sustainable development. All three of the resources are continuously in high demand due to continuous population and economic growth, among other factors. Water, food, and energy security are strongly interlinked and changes to one will most likely affect the others. Taking a nexus approach, through management and governance to safeguard these resources, will support circular economic principles. Consideration of the Nexus can occur through financial incentives and through awareness/engagement initiatives amongst other methods.

- Scores should be allocated according to if the strategy promotes consideration of the Water-Food-Energy Nexus. A score of zero us given if there is no promotion of considerations for Water-Food-energy Nexus, whilst a score of 1 is given for promotion through financial incentives or awareness/engagement initiatives. A score of 2 is allocated if promotion occurs through both methods.

- **Measure - Promotes alternative greener supply resources:**

  - Green supply resources or green supply chain management directs focus to the traditional supply chain and incorporates sustainable environmental processes into it. It can occur at any stage; product or service design, sourcing and choosing materials, manufacturing, production, operation, or end of life. Therefore, promoting alternative and green resources through awareness/engagement initiatives or financial incentives can tackle carbon footprint reduction within then tourism sector.
  - Scores should be allocated according to promotion of alternative greener supply resources. A score of zero is given if there is no promotion, a score of 1 is given for the promotion through financial incentives or awareness/engagement initiatives, and a score of 2 is given for promotion through both methods.

- **Measure - Capacity building programmes:**

  - Capacity building activities are held with the scope of sharing information and improving knowledge, skills, tools, and other relevant resources needed to address and improve water, energy, waste and mobility issues and management. Such programmes would target the tourism sector, whereby facilities and companies participate in these programmes and are able to replicate sessions with their staff periodically. Are capacity building programmes relating to the circularity of water, energy, waste and mobility offered to tourism organisations?
  - Scores should be allocated based on the presence of capacity building programmes. A score of zero is given if no capacity building programmes are present, whilst a score of 2 is given if capacity building programmes are offered.

- **Measure - Integrates considerations to the virtual carbon footprint:**

  - Virtual carbon can refer to the carbon dioxide derived from fossil fuels that was emitted through upstream supply chains and is imported into an area in the form of goods and services. It does not consider methane ($CH_4$) or other agriculture related gases (Chen, et al., 2020). It can also be described as; the total "carbon footprint of resident tourists as a measure of the domestic and imported virtual carbon related to consumption and investments required to provide those services" (Cadarso, Gomez, Lopez, & Tobarra, 2016, p. 529). Applying a virtual carbon tax to goods and services can be according to the "origin principle", that is goods are taxed in their country of production, or the "destination principle", i.e. goods are taxed in the country where they are consumed (Atkinson, Hamilton, Ruta, & Van der Mensbrugghe, 2011).
  - Scores should be allocated based on if the strategy integrates considerations to the virtual carbon footprint. A score of zero is given if there are no considerations for the virtual carbon footprint, whilst a score of 2 is given for the consideration through application of virtual carbon taxes.

- <u>Measure - Promotes innovative tools such as renewable energy certificates:</u>
    - o Renewable Energy Certificates (REC) can be regarded as an assurance to using energy from renewable sources. Since energy enters the grid from multiple sources, buying RECs along with electricity ensures that the renewable aspect of renewable energy is being used by the certificate's owner. It is beneficial as it does not require the owner to have renewable energy technologies installed onsite. REC buyers can either be voluntary or compliance based to guarantee that a percentage of electricity is from renewable resources. Promotion of these tools can occur through technical support programmes or financial incentives.
    - o Scores should be allocated according to the measures present for the promotion of innovative tools. A score of zero is given if there is no promotion of RECs, whilst a score of 1 is given for the compulsory use of RECs or promotion through technical support or financial incentives. A score of 2 is given for the presence of at least 2 of the measures.

## 5.2. Regenerate – Metrics and Measures

**Water Metric: How does the strategy promote sustainable water supply in the tourism area at the minimum impact on the regional/national water distribution system?**

- Measure - Incentives for the development of non-conventional water resources (NCWR) in tourism entities:

    o As previously explained, incentives can be positive, to favour a specific behaviour, or they can discourage a behaviour. Incentives can be monetary, or award based (ex: for performance), to encourage tourism entities to opt for using non-conventional water resources. Such incentives could be used to fund installation systems for rainwater and storm water recovery, collection and use, or seawater desalination systems. On the other hand, they could also encourage research into developing alternative water resources for use.

    o Scores should be allocated according to the presence of incentives. A score of zero is allocated if no incentives are present, a score of 1 is given if incentives for one type of NCWR are present, whilst a score of 2 is given for the presence of incentives for more than one type of NCWR.

- Measure - Incentives for improved water demand management:

    o Water demand management (WDM) is an approach that focusses on conserving water resources by addressing its demand and increasing overall water use efficiency. Water demand management can be focused to tourism facility level or user level (ex: referring to guests). Attention is placed on maximising use of readily available water amounts and preventing inessential or low use value through different incentives. Incentives could drive research into addressing and measuring water losses, within tourism facilities or by installing water efficient technologies within guest rooms etc.

    o Scores should be allocated according to the presence of incentives for improved water demand management. A score of zero is allocated if there are no specific incentives present, a score of 1 is given for the presence of incentives to promote WDM at either facility or user level, and a score of 2 is given if there are incentives to promote WDM at both facility and user level.

- Measure - Incentives for the recycling of wastewaters:

    o Wastewater recycling is the process whereby wastewaters that have been contaminated through human influence within commercial settings are treated. Within tourism facilities, there are numerous activities that use large amounts of water, such as kitchen and laundry processes, not to mention the water used directly by guests. The treated wastewaters can then be recycled for in-house uses, toilet flushing, irrigation, landscaping services etc. Monetary incentives can be used to motivate the sector to either start treating wastewaters and/or mainstream their recycling. On the other hand, performance-based awards can also incentivise entities to use recycled wastewaters and improve the company's image.

    o Scores should be allocated according to the presence of incentives for recycling of wastewaters. A score of zero is given if there are no specific incentives present, whilst a score of 1 is given if financial or non-monetary incentives to recycle wastewaters present. A score of 2 is given if financial and non-monetary incentives to recycle wastewaters are present.

- Measure - Incentives for the reuse of greywaters:

    o Greywater is that originating from bathroom wash basins, bathtubs, showers and washing machines but not from toilets. This water does not need to be treated and can be reused for flushing systems and irrigation purposes. Financial incentives can help support the installation of the necessary infrastructure to reuse greywaters or to educate on greywater management, whilst non-monetary incentives can be used to reward performance of greywater use.

    o Scores should be allocated according to the presence of incentives for the reuse of greywaters. A score of zero is given if there are no specific incentives present, whilst a score of 1 is given for the presence of financial or non-monetary incentives to reuse greywaters. A score of 2 is allocated if financial and non-monetary incentives to reuse greywaters are present.

- Measure - Technical support for tourism entities to improve water operations:

    o To ensure that there is improvement in water usage within tourism organisations, technical expertise should be offered to educate on the importance of water management and efficiency. Support could be through a technical expert visiting different facilities to carry out water testing, auditing, and monitoring would provide necessary support. Moreover, technical support could also guide establishments during their renovation or development planning. Finally, capacity building through training of staff to efficiently use appliances and educate customers on water related issues, could be an asset to different establishments.

    o Scores should be allocated according to the presence of technical support for improving water operations. A score of zero is given if there is no reference to technical support, a score of 1 is given for the presence of technical support on capacity building or infrastructural aspects, and a score of 2 is given if technical support on both capacity building and infrastructural aspects is offered.

**Energy Metric: How does the strategy promote sustainable energy demand in the tourism areas which limit impact on national/regional distribution systems?**

- Measure - Promotes the adoption of Energy Efficiency (EE) Technologies:

    o Promotion of energy efficient technologies through incentive schemes to encourage the uptake of such technologies. Examples can include LEDs, sensors and controls, appliances with a high energy efficient rating, high efficiency water tanks and boilers, roof insulation, glazing and drought proofing. Moreover, promotion can occur through schemes for different energy efficient typologies relating to building systems, end use energy etc.

    o Scores should be allocated if the strategy promotes the adoption of Energy Efficiency Technologies. A score of zero is given if there is no promotion for the adoption of Energy efficiency technologies through financial incentives or promotional schemes. A score of 1 is given for the presence of financial incentives or promotional schemes, whilst a score of 2 is given if both financial incentives and promotional schemes are present.

- Measure - Promotes the installation of Renewable Energy Technologies:

    o Endorsing the application and installation of renewable energy technologies within the tourism sector, can occur through information campaigns, awareness raising sessions or by means of

incentives. Similarly, offering expert technical guidance for the installation of such technologies would encourage businesses further in adopting them.

- o Scores should be allocated according to the promotion for Renewable Energy Technologies' installation. A score of zero is given if there are no incentives for renewable energy technologies and a score of 1 is given for the presence of monetary incentives or technical guidance for installation of renewable energy technologies. A score of 2 is given for the presence of monetary incentives and technical guidance for installation of renewable energy technologies.

- **Measure - Promotes the installation of Energy Storage Facilities:**

  - o Energy storage facilities within tourism areas can either be installed for the whole area or inhouse. Energy storage facilities are important as a means of ensuring that renewable energy generated on site is used by facilities, including smaller tourism entities. Authorities can offer financial incentives to help facilities design or set up such systems. It can also be promoted by educating through information campaigns on the benefits of using energy storage facilities. Offering technical expertise to tourism establishments is another way of endorsing installation.

  - o Scores should be allocated according to if the strategy promotes the installation of Energy Storage Facilities. A score of zero is given if there are no incentives for energy storage facilities, a score of 1 is given if incentives for the design of integrated storage or for installations are offered, and a score of 2 is given if there are incentives for both.

- **Measure - Promotes the combined use of heat and energy:**

  - o Combined heat and power (CHP) are an energy efficient process that generates electricity whilst capturing the heat generated, that would otherwise be lost. This heat can then be used to provide thermal energy to buildings. Promoting this technology can be done through incentives (financial or otherwise) or technical information targeting the tourism sector.

  - o Scores should be allocated according to if the strategy promotes the combined use of heat and energy. A score of zero is given if there are no incentives for the use of CHP, a score of 1 is given for the presence of financial incentives or technical guidance for the use of CHP, and a score of 2 is given if there are incentives for both.

- **Measure - Promotes the adoption of Building Management Systems by tourism entities:**

  - o Promotion can occur through information campaigns or by means of incentives to encourage BMS implementation within the industry. Having the information available regarding the facilities' energy performance can in turn encourage upgrading of technologies and infrastructure to improve efficiency. Furthermore, having such a system in place can act as a precursor for applying for building energy rating certification. Thus, also boosting a company's public image.

  - o Scores should be allocated according to if the strategy promotes the adoption of a BMS by tourism entities. A score of zero is given if there are no incentives present, a score of 1 is given for the presence of promotional incentives or financial incentives, and a score of 2 is given for the presence of promotional and financial incentives.

**Waste Metric: How does the strategy encourage tourism facilities to limit their impact on national waste management facilities?**

- Measure - Promotes waste reduction/minimising yearly tonnage to landfill:

    o A crucial part of reducing waste and minimising landfilling, is by determining waste generation patterns within facilities and within the tourism sector. Furthermore, there must be proper supply chain management and communication with staff, to ensure efficient purchasing and storage of supplies. Moreover, there should be collaboration between catering establishments and local food banks as a means of ensuring that food that would have otherwise been discarded, is used responsibly. Establishments can be offered financial incentives to improve their waste management (ex: setting up composting systems) or to educate and train staff members. Waste reduction can further be promoted through information campaigns targeting the tourism sector.

    o Scores should be allocated according to the promotion of waste reduction/ minimising yearly landfilling. A score of zero is given if no incentives are present to promote waste reduction, a score of 1 is given for the presence of promotional incentives or financial incentives, and a score of 2 is given for the presence of promotional and financial incentives.

- Measure - Discourages the use of single use products/materials:

    o National or regional measures (ex: legislative) in place to prevent the sale or purchasing of single use products (ex: plastic bags, cutlery, and straws, heavily packaged products etc.). Educational materials can be used to target tourism entities to reduce the use of single use products or by providing specific technical support at the entity level.

    o Scores should be allocated according to if the strategy discourages the use of single use products/materials. A score of zero is given if there are no measures in place to discourage use of single products/materials, a score of 1 for the presence of national/regional measures or educational measures focusing on single use products, and a score of 2 for the presence of both national/regional measures and educational measures.

- Measure - Promotes conversion of bio-degradable Waste to Energy (WtE):

    o Converting bio-degradable waste to energy through bio-digestion, creates biogas that can supply heating and electricity to different facilities or be used for transportation. Tourism entities can support use at regional or national levels by participating in pilot projects and public consultations or joining WtE committees. Education campaigns and materials can be disseminated throughout the sector to educate relevant stakeholders (other tourism entities and tourists).

    o Scores should be allocated according to if the strategy promotes the conversion of bio-degradable Waste to Energy (WtE). A score of zero is given if there are no measures in place, a score of 1 for participating in WtE activities or educating stakeholders about WtE, and a score of 2 if participating in WtE activities and involved in educating stakeholders about WtE.

- Measure - Promotes the separation of waste for recycling purposes:

  - o Educational programmes and training sessions with tourism staff, about which wastes can be recycled, are means of promoting responsible waste separation. For example, giving instructions on how to properly handle e-wastes (appliances, cables, ink cartridges and batteries). Local authorities can further incentivise separation by supplying waste separation bins to facilities and popular public tourist areas or by giving financial incentives.

  - o Scores should be allocated according to if the strategy promotes the separation of waste for recycling purposes. A score of zero is given if no incentives are present, a score of 1 for the presence of monetary incentives or technical guidance, and a score of 2 for the presence of both.

- Measure - Promotes the sourcing of zero km supplies:

  - o Promoting local produce and products can help minimising the impacts associated with importing, whilst also potentially reducing the need for packaging and supporting local farmers and businesses. Moreover, it is a means of promoting local culture through authentic food dishes and products. Financial incentives can safeguard farmers and help to establish a cooperative with tourism businesses. Information dissemination can also encourage stakeholders within the tourism sector to partner with small local businesses, and to promote the sales of locally grown food, authentic local cuisine, and local products.

  - o Scores should be allocated according to if the strategy promotes the sourcing of zero km supplies. A score of 1 is given if there are no incentives present, a score of 1 is given for the presence of financial incentives supporting farmer cooperatives or information dissemination, and a score of 2 for both types of incentives present.

**Mobility Metric: How does the strategy promote the integration of tourism areas in national mobility initiatives?**

- Measure - Promotes incentives for green transport solutions:

  - o Financial incentives offered from government or companies supplying green vehicles to transport operators to encourage the provision of green mobility options. On the other hand, incentives could be directed to transport users to support the transition to green transport solutions. Promotion of incentives (financial or otherwise) can occur through educational/information campaigns or marketing techniques.

  - o Scores should be allocated according to if the strategy promotes incentives for green transport solutions. A score of zero is given if promotion of incentives does not occur, and a score of 2 if the promotion of incentives does occur.

- Measure - Promotes the development of direct public transport routes:

  - o Development of direct public transport routes is a means of mitigating and alleviating traffic pressures in popular tourism areas, by offering transportation services separate to the public transport solutions. It can also improve connectivity between localities/regions to disperse human pressures. Promotion through research funding initiatives and hiring technical experts to strategically developed routes.

  - o Scores should be allocated according to if the strategy promotes the development of direct public transport. A score of zero should be given if there are no measures to help the

development of direct public transport routes, a score of 1 is given for promotion through funding or offering technical guidance, and a score of 2 if both measures are offered.

- Measure - Promotes the diversification of the tourism product:

  o Another method of alleviating human pressures on public areas, is to redirect tourism flow to less well-known areas by means of sustainable mobility services, as a means diversifying the tourism product. Moreover, does the strategy focus on the optimisation of mobility services offered to smaller, less-known facilities (ex: operated by local groups and non-governmental operations). Promotion can occur through social media promotion or through incentivised agreements between local authorities and tourism agencies, tour operators, NGOs etc.

  o Scores should be allocated according to if the strategy promotes the diversification of the tourism product, through inclusive mobility services. A score of zero is given if there are no measures to promote diversification of tourism product, a score of 1 if incentives (financial or otherwise) or use of promotional material are present, and a score of 2 if both measures are present.

- Measure - Promotes infrastructure to enable green transport operations:

  o Green transportation or sustainable transportation includes low-pollution options such as hydrogen and solar powered vehicles, electric vehicles, dual-energy, and natural gas vehicles. Does current infrastructure accommodate charging ports for electric vehicles, and are alternative synthetic fuel sources available at fueling stations etc.? Funding by local authorities into research initiatives and hiring technical experts to set up and monitor infrastructure supporting green transport operations. Moreover, promotion of incentives can occur through educational/information campaigns or marketing techniques.

  o Scores should be allocated according to if the strategy promotes infrastructure to enable green transport solutions. A score of zero is given for no measures in place, a score of 1 if financial or technical information regarding infrastructure for green transport operations is offered, and a score of 2 if both measures are present.

- Measure - Promotes infrastructure to encourage cycling and walking:

  o Funding by local authorities into research and planning initiatives and hiring technical experts to set up and monitor infrastructure to encourage cycling and walking, but also to monitor and improve pre-existing infrastructure (ex: bicycle lanes, pedestrian areas, and hiking routes). Prioritising open green spaces instead of roads. Infrastructure for cycling, must be fully integrated with the rest of the area's transportation network.

  o Scores should be allocated according to if the strategy promotes infrastructure to encourage cycling and walking. A score of 1 is given if there no measures in place, a score of 1 for financial or technical guidance regarding infrastructure for cycling and walking, and a score of 2 if both measures are present.

**Horizontal Metric: How does the strategy promote the protection/conservation of natural areas?**



**Horizontal**

- Measure - Environmental Protection Legislation:

  o Environmental legislation established by local/national governing body addressing environmental protection and/ or conservation of natural areas (ex: coastal and marine

environments, forests, nature, and biodiversity). Does the strategy factor in the presence of environmental protection legislation during planning, promotion, or development of the sector? Moreover, has the tourism sector made the effort to participate in the development of national environmental strategies for the local or regional areas?

- o Scores should be allocated according to the presence of environmental protection legislation for the tourism area. A score of zero is allocated if there is no environmental protection legislation in place, whilst a score of 2 is allocated if there is environmental protection legislation in place.

- Measure - Promotes integrated policy approaches:

  - o An integrated policy approach refers to collaboration between departments and public authorities (horizontal integration) and with different levels of government (vertical integration), to create practical and strategic policies. Does the strategy promote communication and collaboration between different sectors and regions to ensure inclusivity amongst involved stakeholders, through consultation or reach-out programmes?
  - o Scores should be allocated according to if the strategy promotes an integrated policy approach. A score of zero is given if there are no measures to promote integrated policy approaches, a score of 1 if financial incentives to encourage consultation with stakeholders or promotion through reach-out programmes are present, and a score of 2 if both measures are offered.

- Measure - Addresses the protection of natural recreational areas:

  - o Encouraging environmental stewardship of natural recreational areas can be driven by legislative tools or by involving local agencies and non-governmental agencies to participate in conservation efforts. Moreover, research into visitors' movement patterns can help highlight any areas that need additional protective measures, whilst ensuring that a system allowing for effective enforcement is realised. Awareness/engagement initiatives such as information campaigns can spread awareness to citizens and tourists, regarding ongoing protection measures and how they can do their part (ex: by properly disposing of waste, respecting different ecosystems etc.)
  - o Scores should be allocated according to if the strategy addresses the protection of natural recreational areas. A score of zero is given if there are no measures present, a score of 1 if there are legislative instruments ensuring effective enforcement or awareness/engagement initiatives, and a score of 2 if both measures are present.

- Measure - Promotes alternative natural facilities:

  - o Promoting less frequented natural areas with incentives (ex: visitors pay cheaper transport fees to certain areas), and through promotional campaigns and material, can encourage locals and tourists to visit such sites. In doing so, dispersing visitors to different areas. By promoting alternative areas, more value is given to sustainable local activities (ex: buying from local fisheries). It also requires collaboration between tourism actors and environmental authorities.
  - o Scores should be allocated according to if the strategy promotes alternative natural facilities. A score of zero is given if there is no promotion, a score of 1 for promotion through incentives or promotional material, and a score of 2 for promotion through both.

- <u>Measure - Promotes Corporate Social Responsibility (CSR) initiatives by the sector:</u>
  - Corporate Social Responsibility measures of tourism businesses include conserving landscapes, biodiversity and cultural heritage, fair use of natural resources, local products, and services, and involving local communities. Giving publicity to CSR initiatives by tourism entities within the sector, will act as a means of stimulating and encouraging other entities to follow suit. Promotion can occur through information/awareness campaigns and social media marketing. In addition to this, incentivising through funding or performance-based awards can trigger more proactivity within sector.
  - Scores should be allocated according to if the strategy promotes corporate social responsibility initiatives by the sector. A score of zero is given if no measures are offered and a score of 1 for the presence of incentives (financial or in-kind) or promotional material to encourage CSR initiatives. A score of 2 is given if both are offered.

## 5.3. Rethink – Metrics and Measures

**Water Metric: How does the strategy promote the value of water? (to properly quantify the significance of its use).**

- Measure - Based on consultation with stakeholders from water sector:

  o The possibility for open communication and consultation between public and private stakeholders to discuss the value of water within the tourism sector and to make decisions accordingly. Does the strategy offer incentives (financial or technical guidance), to set up working groups or advisory committees, voluntary cooperation programmes/schemes between different actors or does it require obligatory participation between sectors' stakeholders through legislative measures?

  o Scores should be according to if the strategy is based on consultation with stakeholders from the energy sector. A score of zero is given if there are no measures to trigger consultation between public and private stakeholders, a score of 1 is given for the presence of financial or technical incentives to encourage consultation, and a score of 2 for the presence of financial and technical incentives and/or presence of legislative measures.

- Measure - Based on post-strategy adoption, follow-up consultation with stakeholders from the public and private sector:

  o Did the strategy allow for post-adoption participation and feedback, to discuss the value of water, from the public and private sector (ex: bi-yearly consultations with stakeholders)? Does the strategy offer incentives (financial or technical guidance), to set up working groups or advisory committees?

  o Scores should be allocated according to if the strategy is based on follow-up consultation stakeholders from the public and private sector. A score of zero is given if no measures offered, a score of 1 is given for the presence of financial or technical incentives to encourage consultation, and a score of 2 is given for the presence of both.

- Measure - Identifies threats of tourism on other water using sectors:

  o To identify the threats from tourism activities on other water using sectors (manufacturing, agriculture etc), research and monitoring must be carried out to determine water related behaviours. Financial incentives given for research and monitoring tourism related threats to water and the effects on other sectors. Technical support incentives for carrying out risk assessments throughout sector, can be offered as a means of mitigating potential further damage.

  o Scores should be allocated according to if there are measures to help the identification of threats of tourism on other water using sectors. A score of zero is given if there no measures in place, a score of 1 if there are financial incentives for research programmes addressing threats from tourism or incentives for technical support present, and a score of 2 if both incentives are present.

- Measure - Outreach programmes to outline use of water by the tourism sector:

  o Outreach programmes can occur though educational campaigns/ materials addressing water usage within tourism organisations or by addressing tourists' water behaviours. Moreover,

incentives for technical support/workshops to help organisations have a clear and strategic plan for improving water efficiency.

- o Scores should be allocated according to if there are measures in place for the promotion of outreach programmes, outlining the use of water by the sector. A score of zero is given if no measures are offered, a score of 1 for the promotion through educational campaigns/ materials or incentives for technical support/ workshops, and a score of 2 if both measures are available.

- Measure - Promotes provision of reclaimed water to other sectors:

  - o Reclaimed water can be supplied to other sectors if there is proper infrastructure in place, whilst also promoting the use and benefits of reclaimed water. Financial incentives can be used for installing or improving connecting water infrastructure between sectors. In the presence of "extra" reclaimed water that is not being used by tourism facilities, is there the possibility to provide it to other sectors?
  - o Scores should be allocated according to if the strategy promoted the provision of reclaimed water by other sectors. A score of zero is given if there is no provision of reclaimed water to other sectors, and a score of 2 is given for the promotion of reclaimed water to other sectors.

**Energy Metric: How does the strategy promote the rethinking of energy consumption within the tourism sector?**

- Measure - Based on consultation with stakeholders from the energy sector:

  - o The possibility for open communication and consultation between public and private stakeholders to discuss energy consumption, energy efficiency and production of energy from RES within the tourism sector and to make decisions accordingly. Does the strategy offer incentives (financial or technical guidance), to set up working groups or advisory committees, voluntary cooperation programmes/schemes between different actors or does it require obligatory participation between sectors' stakeholders through legislative measures?
  - o Scores should be allocated according to if the strategy is based on consultation with stakeholders from the energy sector. A score of zero is given if there are no measures to trigger consultation between public and private stake holders, a score of 1 is given for the presence of financial or technical incentives to encourage consultation, and a score of 2 for the presence of financial and technical incentives and/or presence of legislative measures.

- Measure - Outreach programmes to outline use of energy by the tourism sector:

  - o Outreach programmes can occur though educational/awareness campaigns and /or materials addressing energy usage from tourist establishments or by addressing tourists' energy behaviours. Such programmes also encourage engagement from both private and public sectors. Moreover, incentives for technical support/workshops (ex: energy audits and the presence of help desks) to help organisations have a clear and strategic plan for improving energy efficiency.
  - o Scores should be allocated according to if there are measures in place for the promotion of outreach programmes, outlining the use of energy by the sector. A score of zero is given if there are no measures present, a score of 1 is given for the promotion through educational campaigns/ materials or incentives for technical support/workshops, and a score of 2 is given if both measures are available.

- Measure - Identifies threats of tourism on the energy demand of other sectors:

    o To identify the threats from tourism activities on other energy using sectors (manufacturing, agriculture etc), research must be carried out to determine the source of energy threats from tourism sector. Financial incentives can be offered to research and monitor the threats and effects on other sectors. Incentives for technical support to organisations within tourism sector, can act as a means of mitigating potential further damage.

    o Scores should be allocated according to if there are measures to help the identification of threats of tourism on other energy using sectors. A score of zero is given if there are no measures in place, a score of 1 is given if financial incentives for research programmes addressing threats from tourism or incentives for technical support are offered, and a score of 2 if both incentives are present.

- Measure - Encourages research into energy consumption characteristics:

    o Research into energy consumption characteristics can be encouraged by incentivising the installation of equipment that monitors energy consumption within facilities (ex: Energy Management System) or by offering technical support in the form of energy audits.

    o Scores should be allocated according to if there are measures to encourage research into energy consumption characteristics of facilities. A score of zero is given if there are no measures present, a score of 1 is given for either incentivising the use of energy monitoring/managing technologies or offering technical support though energy auditing, and a score of 2 is given if both measures are in place.

- Measure - Integrates energy resourcing with surrounding community:

    o For the integration of energy resourcing with surrounding communities, efficient connectivity must be taken into consideration. Improving connectivity can allow any renewable energies created to enter the grid and be sold to other facilities. Financial incentives can be used to improve energy integration (ex: through installation of energy storage systems or connection to electric smart grid) or to offer technical support for installation of energy storage systems or use of smart grid.

    o Scores should be allocated according to if there are measures to help the integration of energy resourcing with the surrounding communities. A score of zero is given if there are no measures being offered, a score of 1 is given for the presence of financial incentives or technical support, and a score of 2 is given if both measures in place.

**Waste Metric: How does the strategy mitigate waste generation within the tourism sector?**

- Measure - Based on consultation with stakeholders from the waste management sector:

    o The possibility for open communication and consultation between public and private stakeholders to discuss waste mitigation within the tourism sector and to make decisions accordingly. Does the strategy offer incentives (financial or technical guidance), to set up working groups or advisory committees, voluntary cooperation programmes/schemes between different actors or does it require obligatory participation between sectors' stakeholders through legislative measures?

- o Scores should be allocated according to if the strategy is based on consultation with stakeholders from the waste management sector. A score of zero is given if there are no measures to trigger consultation between public and private stakeholders, and a score of 1 for the presence of financial or technical incentives to encourage consultation. A score of 2 is given for the presence of financial and technical incentives and/or presence of legislative measures.

- Measure - Outreach programmes to outline waste management of sector:

  - o Outreach programmes can occur though educational/awareness campaigns/materials addressing and informing on waste management patterns within tourist establishments or tourists' waste generation trends and how to improve them. Such programmes also encourage engagement from both private and public sectors. Moreover, incentives for technical support/workshops to help organisations have a clear and strategic plan for improving waste management.
  - o Scores should be allocated according to if there are measures in place for the promotion of outreach programmes, outlining the waste management by the sector. A score of zero is given if there are no measures present, a score of 1 for promotion through educational campaigns/ materials or incentives for technical support/workshops, and a score of 2 if both measures are available.

- Measure - Integrates waste management with surrounding community:

  - o For the integration of waste management with surrounding communities, the tourism sector must support the efforts of waste service providers at a national level, where possible. This can be through passive efforts such as dissemination of information to stakeholders or through active measures such as financially incentivising their integration of waste management with surrounding communities.
  - o Scores should be allocated according to if there are measures to help the integration of waste management with the surrounding communities. A score of zero is given if there are no incentives present, a score of 1 if passive or active measures for integration are offered and a score of 2 if both measures are present.

- Measure - Identifies threats from tourism related waste on other sectors:

  - o To identify the threats of waste from tourism activities on other sectors, research and monitoring must be carried out to determine waste generating behaviours. Have the threats of wastes of potential/actual developments within the tourism sector been considered?
  - o Scores should be allocated according to if there are measures to help the identification of threats from tourism related waste on other sectors. A score of zero is given if identification of threats has not occurred, and a score of 2 is given if threats from tourism related wastes on other sectors, have been identified.

- Measure - Encourages research into waste generation characteristics of sector:

  - o Research into waste generation characteristics can be encouraged by incentivising collaboration between tourism establishments and waste management providers that collect facilities' waste. In doing this, information relating to the amounts and types of collected wastes can be relayed back to the waste producers. Offering technical support in the form of waste audits will also further support research efforts.

- o Scores should be allocated according to if there are measures to encourage research into waste generation characteristics of the sector. A score of zero is given if there are no measures present, a score of 1 for either incentivising partnerships between establishments and waste management providers or offering technical support though waste auditing, and a score of 2 if both measures are in place.

**Mobility Metric: How does the strategy promote the transformation of transport services in tourism destinations?**

- Measure - Based on consultation with stakeholders from public transport sector:

    - o Does the strategy offer incentives (financial, technical, or otherwise), to set up working groups or advisory committees, voluntary cooperation programmes/schemes between different actors, or does it require obligatory participation between public transport stakeholders through legislative measures?
    - o Scores should be allocated according to if the strategy is based on consultation with stakeholders from public transport. A score of zero is given if there are no measures to trigger consultation between stakeholders from the public transport sector, a score of 1 for the presence of financial or technical incentives to encourage consultation, and a score of 2 for the presence of financial and technical incentives.

- Measure - Based on consultation with stakeholders from private transport sector:

    - o Does the strategy offer incentives (financial, technical, or otherwise), to set up working groups or advisory committees, voluntary cooperation programmes/schemes between different actors, or does it require obligatory participation between private transport stakeholders through legislative measures?
    - o Scores should be allocated according to if the strategy is based on consultation with stakeholders from private transport. A score of zero is given if there are no measures to trigger consultation between public and private stakeholders, a score of 1 for the presence of financial or technical incentives to encourage consultation, and a score of 2 for the presence of financial and technical incentives.

- Measure - Promotes benchmarks for transport services diversification:

    - o A benchmark is a standard that makes it possible to compare results of activities (ex: performance of transport sector) with those of competitors or with fixed standards. The presence of benchmarks would be used to provide a metric against which the diversification of transport services can be gauged, like for example when comparing the environmental impact of the transportation sector. Having benchmarks in place, pushes environmental proactivity beyond legal requirements.
    - o Scores should be allocated according to if the strategy promotes benchmarks for transport services diversification. A score of zero is given if no benchmarks are present, a score of 1 is given if voluntary benchmarks for transport services diversification are present, and a score of 2 if obligatory benchmarks for transport services diversification are present.

- Measure - Identifies threats from tourism transport on other sectors:

    - To identify the threats on public transport from tourism related development/ activities, on other sectors, research, monitoring and consultation must occur. Have the threats of potential/actual developments within the tourism sector been considered?
    - Scores should be allocated according to if there are measures to help the identification of threats from tourism related transport on other sectors. A score of zero is given if identification of threats has not occurred, and a score of 2 if threats from tourism related transport on other sectors, have been identified.

- Measure – Integrates transport services with national development policies:

    - Have transport services been properly planned and developed in conjunction with national development policies? Is there direct reference to other policies as means of ensuring alignment and integration? Is there the possibility for continued involvement within national development policies?
    - Scores should be allocated according to if there are measures to help the integration with national development policies. A score of zero is given if there is no integration, a score of 1 for direct reference to other policies and a score of 2 if there is the possibility for continuous involvement.

**Horizontal Metric: How does the strategy encourage and support collaboration of the tourism sector with other sectors?**

**Horizontal**

- Measure - National Tourism Policy Forum:

    - A National Tourism Policy Forum is a chance for relevant stakeholders to meet and discuss measures and the future of the tourism sector. It promotes collaboration between tourism actors and other sectors, too. Financial incentives can encourage participation and contribution to such forums whilst performance-based awards will further encourage participation.
    - Scores should be allocated according to if there are measures to encourage participation in a National Tourism Policy Forum. A score of zero is given if there no measures in place, a score of 1 if there are incentives for participation within the Forum or performance-based measures to encourage participation, and a score of 2 if both measures are present.

- Measure - Promotes research on tourism impacts on other sectors:

    - Incentives available to support research into tourism pressures on surrounding environments carrying out tourism impact assessment. Research can occur through prior and post strategy enactment consultation activities, between private stakeholders and the public within the tourism sector (relating to tourism establishments/facilities and water, energy, waste, and mobility stakeholders). It must be noted that for this measure, public consultation specifically refers to the involvement of local citizens.
    - Scores should be allocated according to if there are measures to promote research on tourism impacts on other sectors.  A score of zero is given if no research into tourism impacts occurs, a score of 1 is given if research occurs through prior consultation with private stakeholders or the public, and a score of 2 if consultation with both private stakeholders and the public.

- Measure - Promotes reach out activities to other sectors and communities:

  o Incentives to fund the setup of trade fairs or conferences allowing for the promotion of the latest technologies or products with the tourism sector. Such events facilitate communication efforts and collaboration between other sectors and communities with the tourism sector. Reach out activities can occur by incentivising partnerships with community members and local community organisations.
  o Scores should be allocated according to if there are measures to promote reach out activities to other sectors and communities.  A score of zero is given if there are no measures present, a score of 1 if there are measures to promote trade fairs/conferences or to promote partnerships with local community members/organisations, and a score of 2 if both measures are present.

- Measure - Promotes holistic "local development plans" for touristic areas:

  o Local development plans refer to the planning necessary for further growth and development within the tourism industry.
  o Scores should be allocated according to if there are measures to promote "local development plans" for touristic areas.  A score of zero is given if there are no measures present, a score of 1 is given if measures for either financial or technical support are offered and a score of 2 for the presence of both measures.

- Measure - Promotes integrated management plans for touristic areas:

  o Integrated management of an area involves considering of all the different aspects that make up a visitor's experience, such as contact with residents and local businesses. Involving local agents throughout the creation of such management plans can ensure that all actors agree on set goals and have been included in long term management planning. Promotion can occur through proactive participation from tourism entities.
  o Scores should be allocated according to if the strategy promotes integrated management plans for touristic areas. A score of zero is given if local tourism stakeholders are not consulted, a score of 1, if local stakeholders are informed of plans/ developments but cannot participate in feedback/discussion sessions, and a score of 2, if local stakeholders are informed of and participate in the creation of management plans.

## 5.4. Innovate – Metrics and Measures

Under this principle, the metrics for the 4 pillars: Water, Energy, Waste, and Mobility, are similar in nature, and therefore the 5 measures assigned to each pillar will be the same (taking the associated pillar into account). The scoring methods will also the same and thus can be applied to each measure accordingly.

**Water Metric: How does the strategy promote innovative systems for managing water demand within the tourism destination?**

- Measure - Promotes increased data acquisition to better identify challenges:

    - Data acquisition occurs through the collection, conversion and sharing of data. Incentives can be used to drive research purposes within the sector through installation of water data collection equipment and data acquisition software. Incentivising the necessity of information sharing with other research entities/ institutions/ sectors. Does data acquisition to identify challenges related to water occur at the level of the tourism entity or at a regional level?
    - Scores should be allocated if the strategy promotes data acquisition. A score of zero is given if it does not promote data acquisition, a score of 1 is given if the strategy does promote data acquisition at entity level or regional level and a score of 2 is given if it promotes data acquisition at both levels.

- Measure - Identifies the Research and Innovation (R & I) challenges of the tourism sector:

    - Is there an agency/institution/organisation currently responsible for identifying such R & I water challenges of the tourism sector? Moreover, how is the identification of R & I water challenges being encouraged – through incentives for researchers and for participating organisations?
    - Scores should be allocated if the strategy identifies the R & I challenge of the tourism sector. A score of zero is given if there is no identification for R & I challenges. A score of 2 is given if there is an agency or body responsible for identifying R & I challenges. A score of 2 can also be given if R & I is being encouraged through incentives and such. If both options are present the score remains a 2.

- Measure - Promotes the participation of the tourism sector in Research and Innovation programmes:

    - Ensuring participation in water R & I programmes from different tourism sector stakeholders, can occur by promoting the importance of stakeholders' participation (through marketing efforts/reach out campaigns), and by incentivising stakeholders to participate in workshops, pilot projects etc.
    - Scores should be allocated if the strategy promotes participation from the tourism sector in R & I programmes. A score of zero is given if there is no promotion for participation in R & I programmes, a score of 1 is given for the promotion through marketing/ reach out campaigns or by incentivising participation, and a score of 2 is given for the presence of both.

- Measure - Facilitates the participation of tourism operators in sectoral conferences:

    - Facilitating participation of tourism operators in sectoral conferences (relating to water demand management) through financial incentives (or awards that can boost public image of companies) or by providing a platform for information dissemination and feedback.

Scores should be allocated according to the support available for the participation in sectoral conferences. A score of zero is given if there are no measures in place, a score of 1 is given for the presence of incentives or an information platform, and a score of 2 is given for the presence of both.

- Measure - Promotes the market entry of innovative technologies:

    o Facilitating communication measures (ex: through feedback sessions, surveys etc) between destination stakeholders and producers of new technologies as a measure of ensuring their adoption. Promotion can further occur through information campaigns or through marketing efforts.

    o Scores should be allocated according to if the strategy promotes the market entry of innovative techniques. A score of zero is given if no measures are present, a score of 1 is given if communication measures or campaigns/marketing are present, and a score of 2 is given for the presence of both promotional measures.

**The above measure descriptions can be repeated for the following sections – Energy, Waste and Mobility

***Scores should be allocated to if and how many measures, are in place, that is a score of zero is given if no measures are present, a score of 1 is given for the presence of 1 measure, and a score of 2 is given for the presence of both measures in place.

**Energy Metric: How does the strategy promote innovative systems for managing energy demand within the tourism destination?**

- Measure - Promotes increased data acquisition to better identify challenges
- Measure - Identifies the Research and Innovation challenges of the tourism sector
- Measure - Promotes the participation of the tourism sector in Research and Innovation programmes
- Measure - Facilitates the participation of tourism operators in sectoral conferences
- Measure - Promotes the market entry of innovative technologies

**Waste Metric: How does the strategy promote innovative systems for optimising waste management within the tourism destination?**

- Measure - Promotes increased data acquisition to better identify challenges
- Measure - Identifies the Research and Innovation challenges of the tourism sector
- Measure - Promotes the participation of the tourism sector in Research and Innovation programmes
- Measure - Facilitates participation of tourism operators in sectoral conferences
- Measure - Promotes the market entry of innovative technologies

**Mobility Metric: How does the strategy promote innovative systems in aiding efficient mobility within the tourism destination?**

- Measure - Promotes increased data acquisition to better identify challenges
- Measure - Identifies the Research and Innovation challenges of the tourism sector
- Measure - Promotes the participation of the tourism sector in Research and Innovation programmes
- Measure - Facilitates the participation of tourism operators in sectoral conferences
- Measure – Promotes the market entry of innovative technologies

**Horizontal Metric: How does the strategy promote innovative solutions for the environment and/or circular measures/technologies?**

**Horizontal**

- Measure - Establishes an R&I strategy addressing specific tourism challenges:

  o Through consultation with different sectors, a long-term R & I strategy is important to address circular tourism challenges. Is a R & I strategy in the process of being established and have all sectors been involved in its formation?

  o Scores should be allocated according to the presence of an R & I strategy. A score of zero is given if there is no R & I strategy established, a score of 1 is given if the R & I strategy is in the process of formation and a score of 2 is given if the R & I strategy is already in place.

- Measure - Allocates funds for research projects in the tourism industry:

  o Is funding of research projects within the tourism industry, with attention to innovative environmental/circular solutions, offered?

  o Scores should be allocated according to funding being offered for research projects. A score of zero is given if there are no funding schemes present, a score of 1 is given if funds are offered as a one-time measure and a score of 2 is given if funds are offered regularly.

- Measure - Supports capacity building in the tourism sector:

  o Capacity building initiatives focusing on innovative solutions for the environment and/or circular measures/technologies, can be supported through financial incentives (ex: for resources, training sessions etc) and by input from technical experts.

  o Scores should be allocated according to the support for capacity building being offered. A score of zero is given if there are no supporting measures in place, a score of 1 is given if financial incentives or technical support measures are present, and a score of 2 is given if both financial incentives and technical support measures are offered.

- Measure - Establishes centralised technical support services:

  o Are, technical supporting services offered within the sector to advise tourism enterprises easily accessible?

  o Scores should be allocated according to the presence of technical support services. A score of zero is given if no technical support services are offered, a score of 1 is given if technical support services are offered but against a fee, and a score of 2 is given if free technical support services are available.

- Measure - Promotes conventions on innovative solutions:

  o Does the strategy support conventions on innovative solutions, through hosting or incentivising participation/attendance to conventions outside of region?

  o Scores should be allocated according to the promotional measures in place. A score of zero should be allocated if no measures for promoting conventions on innovative solutions are present, a score of 1 is given if there is promotion through hosting of conventions or incentivising participation/attendance, and a score of 2 is given for the presence of both measures.

## 5.5. Revalue – Metrics and Measures

**Water Metric: How does the strategy promote the use of non-conventional (alternative) water resources within the tourism destination?**

- Measure - Water auditing to identify opportunities for non-conventional water resource use:

  o Water auditing should be carried out through site visits, and regular monitoring to determine the possibilities for using non-conventional water and how this can be done. Is support from water auditing technical experts readily available to support such facilities?

  o Scores should be allocated according to if support of water auditing for NCWR, is offered or not. A score of zero is given if there are no support measures for water auditing, a score of 1 is given for the support for external auditing, and a score of 2 is given for support for internal auditing facilities.

- Measure - Support schemes for "normal" and "deep" retrofitting works:

  o Normal retrofitting works are usually fast and easy options, targeting isolated system upgrades. Are there any schemes present that support entities' use of non-conventional resources for landscaping and other centralised activities?

  o Deep retrofitting works require more planning than "normal" works, to allow for "systems-thinking" approach. This helps to evaluate the different interactions between different and isolated components of a facility. Despite the extra effort needed for this, it can result in high cost- effectiveness. Deep retrofitting works is the installation of secondary distribution systems allowing for the use of alternative water resources. Are there any schemes present, that support entities in "deep" retrofitting work, in relation to water?

  o Scores should be allocated according to the presence of support schemes for retrofitting works. A score of zero is given if there are no support schemes offered, a score of 1 is offered for the presence of support schemes for either "normal" or "deep" retrofitting works, whilst a score of 2 is given if both types of support schemes are offered.

- Measure - Establishes a comprehensive Water Management Plan:

  o Is there a comprehensive water management plan in place, that has been strategically designed to satisfy the needs of people and businesses in the tourism sector? Does it take the short, medium- and long-term considerations of water demand, into account?

  o Scores should be allocated according to if the strategy has established a comprehensive water management plan. A score of zero is given if there is no comprehensive water management plan present, a score of 1, if a comprehensive water management plan is in the development process, and a score of 2, if a comprehensive water management plan has already been established.

- Measure - Establishes voluntary benchmarks for non-conventional water resources:

  o By establishing benchmarks for NCWR to be used within the tourism destination, the strategy is promoting the use of NCW resources. An example of such a voluntary benchmark could relate to the level (%) of water reclaimed compared to the total amount of water used within a tourism facility.

- o Scores should be allocated according to the presence of benchmarks, that is a zero is given if there is no benchmarking for NCWR, whilst a score of 2 is given for the presence of benchmarking for NCWR.

- Measure - Includes benchmarks in Quality labels for the sector:

  - o Benchmarking should be present for Quality labels (in relation to water) that are applied to products, offered by the tourism sector. The higher the percentage of reclaimed water in such products, the higher the Quality Label grade.
  - o Scores should be allocated according to the presence of benchmarks, that is a score of zero is given if there is no benchmarking in Quality labels, whilst a score of 2 is given for the presence of benchmarking in Quality labels in the sector.

**Energy Metric: How does the strategy promote alternative sustainable energy resources?**

- Measure - Energy auditing to identify key optimisation actions:

  - o Energy auditing should be carried out through site visits, and regular monitoring to determine optimisation actions for energy use within tourism facilities. Is support from energy auditing technical experts readily available to such facilities?
  - o Scores should be allocated according to if support of energy auditing for alternative energy solutions is offered or not. A score of zero is given if there are no support measures for energy auditing, a score of 1 is given for the support of external auditing and a score of 2 is given if there is support for internal auditing facilities.

- Measure - Support schemes for "normal" and "deep" retrofitting works:

  - o Normal retrofitting works are usually fast and easy options, targeting isolated system upgrades. This would include works such as the installation of photovoltaic cells or solar water heaters on roofs.
  - o "Deep" retrofitting works include installing integrated glass panes or improving heating and cooling systems to use renewable energies. Deep retrofitting works would be incorporated into a period refurbishment. Does the strategy offer any schemes present that support entities in "deep" retrofitting work, in relation to energy?
  - o Scores should be allocated according to the presence of support schemes for retrofitting works. A score of zero is given if there are no support schemes offered, a score of 1 is offered for the presence of support schemes for either "normal" or "deep" retrofitting works, whilst a score of 2 is given if both types of support schemes are offered.

- Measure - Establishes a comprehensive Energy Development Plan:

  - o Is there a comprehensive energy development plan in place, that has been strategically designed to satisfy the needs of people and businesses in the tourism sector? Does it take the short, medium- and long-term considerations of energy demand, into account?
  - o Scores should be allocated according to if the strategy has established a comprehensive energy development plan. A score of zero is given if there is no comprehensive energy development plan present, a score of 1, if a comprehensive energy development plan is in the development process, and a score of 2, if a comprehensive energy development plan has already been established.

- Measure - Establishes voluntary benchmarks for alternative energy solutions:

    o By establishing benchmarks for renewable energy to be used within the tourism destination, the strategy is promoting the use of alternative energy solutions. An example of such a voluntary benchmark could relate to the level (%) of renewable energy compared to the total energy demand within the tourism facility.

    o Scores should be allocated according to the presence of benchmarks, that is a zero is given if there is no benchmarking for alternative energy solutions, whilst a score of 2 is given for the presence of benchmarking for alternative energy solutions.

- Measure - Includes benchmarks in Quality labels for the sector:

    o Benchmarking should be present for Quality labels (in relation to energy) that are applied to products, offered by the tourism sector. The higher the percentage of renewable energy generated on site and in relation to energy demand, the higher the Quality Label grade.

    o Scores should be allocated according to the presence of benchmarks, that is a score of zero is given if there is no benchmarking in Quality labels, whilst a score of 2 is given for the presence of benchmarking in Quality labels in the sector.

**Waste Metric: How does the strategy promote the sustainable reuse of waste?**

- Measure - Waste auditing to identify key optimisation actions:

    o Waste auditing should be carried out through site visits, and regular monitoring to determine optimisation actions for waste, within tourism facilities. Is support offered to those tourism facilities wanting to optimise their waste reuse? Moreover, are waste auditing technical experts readily available to support such facilities?

    o Scores should be allocated according to if support of waste auditing for waste reuse optimisation, is offered or not. A score of zero is given if there are no support measures for waste auditing, a score of 1 is given for the support of external auditing and a score of 2 is given if there is support for internal auditing facilities.

- Measure - Establishes a comprehensive Waste Management Plan:

    o Is there a comprehensive waste management plan in place, that has been strategically designed to satisfy the needs of people and businesses in the tourism sector? Does it take the short, medium- and long-term considerations of waste generation, into account?

    o Scores should be allocated according to if the strategy has established a comprehensive waste management plan. A score of zero is given if there is no comprehensive waste management plan present, a score of 1, if a comprehensive waste management plan is in the development process, and a score of 2, if a comprehensive waste management plan has already been established.

- Measure - Proposes support schemes for undertaking waste reuse:

    o Has the strategy considered the proposition and introduction of support schemes for waste reuse efforts within the tourism sector, such as through contribution of WtE or for recycling purposes? Support schemes here are referring to financial support.

    o Scores should be allocated according to if support schemes have been considered or not. A score of zero is given if support schemes have not been considered, a score of 1 if support schemes

have been considered and will be introduced in the future, and a score of 2, if support schemes for undertaking waste reuse are already offered.

- Measure - Establishes voluntary benchmarks:

    o These guide behaviour through setting performance benchmarks within organisations/industry. They encourage optimised waste management, benefitting the enterprises and surrounding communities. Such a benchmark could deal with the weight of waste generated per room in a hotel. Having codes and benchmarks in place, pushes environmental proactivity beyond legal requirements.
    o Scores should be allocated according to the presence of benchmarks, that is a zero is given if there is no benchmarking for waste, whilst a score of 2 is given for the presence of benchmarking for waste.

- Measure - Includes benchmarks in Quality labels for the sector:

    o A benchmark is a standard that makes it possible to compare results of activities with those of competitors or with fixed standards. Benchmarking should be present for Quality labels (in relation to waste reuse) that are applied to products, offered by the tourism sector. The higher the percentage of waste reuse and in relation to waste generated, the higher the Quality Label grade.
    o Scores should be allocated according to the presence of benchmarks. A score of zero is given if there is no benchmarking for Quality labels, and a score of 2 is given if benchmarking for Quality labels is offered.

**Mobility Metric: How does the strategy promote the optimisation of available mobility solutions?**

- Measure - Establishes a comprehensive Sustainable Urban Mobility Plan:

    o Is there a comprehensive mobility development plan in place, that has been strategically designed to satisfy the mobility needs of people and businesses in the tourism sector? Does it take the short, medium- and long-term considerations of private and commercial traffic, into account?
    o Scores should be allocated according to if the strategy has established a comprehensive mobility development plan. A score of zero is given if there is no comprehensive mobility development plan present, a score of 1, if a comprehensive mobility development plan is in the development process, and a score of 2, if a comprehensive mobility development plan has already been established.

- Measure - Promotional schemes for innovative solutions (pre-market entry):

    o Are there any promotional schemes present that encourage the generation of innovative solutions to optimise mobility options within the tourism sectors? Promotional schemes can be in the form of information campaigns to highlight the importance of innovative solutions, or through financial support of competitions/hackathons that foster participation to address mobility issues within the tourism sector.

- o Scores should be allocated according to the presence of promotional schemes for the generation of innovative mobility solutions. A score of zero is given if promotional schemes are not offered, whilst a score of 2, if promotional schemes are offered.

- • Measure - Support schemes for greening tourism industry service vehicles:

  - o Are there financial support schemes in place for tourism operators that are taking measures to make vehicles more "green" (more aligned with circular economy requirements)? Examples could include scrappage schemes and electric vehicle schemes targeting the service vehicles of tourism enterprises. These schemes would be specific for vehicles used for enterprises and not for tourists.
  - o Scores should be allocated according to the presence of support schemes for greening industry service vehicles. A score of zero is given if no support schemes are offered and a score of 2, if support schemes for greening vehicles are offered.

- • Measure - Support schemes for greening tourist service vehicles:

  - o Are there financial support schemes in place that are taking measures to make tourist service vehicles, more "green" (more aligned with circular economy requirements)? Examples could include scrappage schemes and electric vehicle schemes targeting transport services to tourists.
  - o Scores should be allocated according to the presence of support schemes for greening tourist service vehicles. A score of zero is given if no support schemes are offered and a score of 2, if support schemes for greening vehicles are offered.

- • Measure - Retrofitting schemes for tourism vehicles:

  - o Are there any retrofitting schemes in place to improve current existing vehicles (used for service or tourists within sector), to be more aligned with circular principles, and minimise the purchasing of new vehicles?
  - o Scores should be allocated according to the presence of retrofitting schemes for greening tourist service vehicles. A score of zero is given if no retrofitting schemes are offered and a score of 2, if retrofitting schemes for greening vehicles are offered.

**Horizontal Metric: How does the strategy promote the upcycling of resources throughout different sectors?**

- • Measure - Considers actions targeting the upcycling of resources:

  - o Upcycling of resources is a process that makes use of waste materials and products with the purpose of repairing, refurbishing, repurposing or reusing them in a unique way that gives them added value (ex: environmental value through using old tyres for paving playgrounds). Does the strategy have a framework in place to consider the different actions targeting the upcycling of resources, over a continuous amount of time? (ex: effort for the continuous targeting of stakeholders to be involved, promotional and capacity building programmes planned for at least a 5-year period?)
  - o Scores should be allocated according to actions present to target upcycling of resources. A score of zero is given is there are no actions targeting the upcycling of resources, and a score of 2, for the presence of framework of actions targeting the upcycling of resources.

- Measure - Promotes the upcycling of resources:

  o Promotional measures are used to bring awareness to the importance of upcycling of resources within the tourism sector, or to highlight upcycling efforts of stakeholders, with the scope of inspiring others. They can be in the form of environmental awareness campaigns or through social media marketing. Awareness/engagement initiatives can also offer information on financial incentives (if present) relative to upcycling.

  o Scores should be allocated according to the promotion for upcycling of resources. A score of zero is given if there is no promotion of upcycling of resources, and a score of 2, is given if promotion does occur.

- Measure - Facilitates capacity building on upcycling within the sector:

  o Capacity building initiatives focusing on upcycling can be supported through financial incentives (ex: for resources, training sessions etc) and by input from technical experts.

  o Scores should be allocated according to the presence of measures to support capacity building efforts for upcycling within the sector. A score of zero is given if there are no supporting measures in place, a score of 1 if there are financial incentives or technical support measures, and a score of 2, if both financial incentives and technical support are offered.

- Measure - Integrates the tourism sector with regional resource upcycling initiatives:

  o For the integration of the tourism sector with regional resource upcycling initiatives the sector must be supported through passive efforts such as dissemination of information to stakeholders or through active measures like outreach programmes, or the introduction of quality labels for upcycled materials.

  o Scores should be allocated according to the presence of incentives to integrate the tourism sector with regional upcycling initiatives. A score of zero is given if there are no incentives present, a score of 1 if passive or active measures for integration are offered, and a score of 2 if both measures are present.

- Measure - Financial incentives for entities involved in resources upcycling:

  o Are there financial incentives or schemes present to encourage tourism entities to get involved in upcycling resource programmes? Incentives can be used to trigger entities to manage their waste and supply it to upcycling companies/ users.

  o Scores should be allocated according to the presence of financial incentives for entities to become involved in resource upcycling. A score of zero is given if no financial incentives are offered, and a score of 2 if financial incentives are offered to entities.

## 5.6. Classification of measures

As explained in section 4, the different metrics and measures are given a weighting and rating respectively. The rating of these measures is determined through a classification system. This classification varies from 0 to 2 and scoring is allocated according to the amount of measures present. According to these specifications, one can then calculate an overall score for each strategy. The higher its score is, the more circular it is in nature. It must be noted that a minimum threshold will be taken into consideration, for the scoring of strategies. The calculated scores will be presented in a way that allows for a broader range of results to fall under a varying extents of "circular" (similar to the circular performance categories used in the Circular Assessment Reports D3.5.3; Concerned A, B; Pro-Activist A, B; Circular A,B), as opposed to categorising the strategy as either circular or not circular.

For example, under the Reduce principle (Water Metric), there are three types of classifications for the following measures:

- Measure - Legislative Instruments:

    o Scores should be allocated according to the presence of legislative instruments relating to water use efficiency and regulating the adoption of water use efficiency technologies. A **score of zero** if no legislative instruments are present or a **score of 2** if legislative instruments are present.

    *In this case, there are two options: 0 for no measures (legislative instruments), and 2 for the presence of measures (legislative instruments).*

- Measure - Positive Financial Incentives:

    o Scores should be allocated according to the presence of financial incentives. That is, a **score of zero** is given if no incentives are present, a **score of 1** if incentives for infrastructure improvement or for adopting water efficient technologies are present, or a **score of 2** for presence of both types of incentives.

    *In this case, there are three options, 0 for no measures, 1 for the presence of one or another type of measure, and 2 for the presence of both types of measures.*

- Measure – Awareness and engagement initiatives:

    o Scores should be allocated according to if awareness/engagement initiatives are present or not. A **score of zero** is given when no awareness/engagement content is offered, a **score of 1** is given if a water awareness campaign tackling general population or targeting specifically the tourism sector as a whole or targeting tourism operators are present, whilst a score of 2 is allocated if both campaign types (targeting tourism sector and tourism operators) are present.

    *Here, there are three options, 0 for no measures, 1 for the presence of one or another type of measure (but there are three possibilities), and 2 for the presence of both tourism specific measures.*

# References

Atkinson, G., Hamilton, K., Ruta, G., & Van der Mensbrugghe, D. (2011). Trade in 'virtual carbon': Empirical results and implications for policy. *Global Environmental Change, 21*(2), 563-574. doi:https://doi.org/10.1016/j.gloenvcha.2010.11.009

Cadarso, M., Gomez, N., Lopez, L., & Tobarra, M. (2016). Calculating tourism's carbon footprint: measuring the impact of investments. *Journal of Cleaner Production, 111*(Part B), 529-537. doi:https://doi.org/10.1016/j.jclepro.2014.09.019

Chen, S., Chen, B., Feng, K., Liu, Z., Fromer, N., Tan, X., . . . Hubacek, K. (2020). Physical and virtual carbon metabolism of global cities. *Nature Communications, 11*(182), 1-11. doi:https://doi.org/10.1038/s41467-019-13757-3

European Commission. (2016). *The European Tourism Indicator System. ETIS toolkit for sustainable destination management.* Luxembourg: Publications Office of the European Union.

MED Sustainable Tourism Community. (2019, September). *Policy Recommendations.* Retrieved from Interreg Mediterranean Sustainable Tourism: https://sustainable-tourism.interreg-med.eu/fileadmin/user_upload/Sites/Sustainable_Tourism/horizontal_project/BTM_Documents/Policy_Recommendations/Policy_Recommendations.pdf

World Tourism Organization and United Nations Environment Programme. (2019). *Baseline Report on the Integration of Sustainable Consumption and Production Patterns into Tourism Policies.* Madrid: UNWTO. doi:https://doi.org/10.18111/9789284420605

# Appendices

## Appendix A: List of indicators from the European Tourism Indicators System (European Commission, 2016)

### Reduce principle:

*Percentage of tourism enterprises taking actions to reduce water consumption.*

*Percentage of tourism enterprises that take actions to reduce energy consumption.*

*Percentage of tourism enterprises separating different types of waste.*

*Percentage of tourists and same-day visitors using local/soft mobility/public transport services to get around the destination*

*Average carbon footprint of tourists and same-day visitors travelling from home to the destination*

### Regenerate principle:

*Water consumption per tourist night compared to general population water consumption per resident night.*

*Energy consumption per tourist night compared to general population energy consumption per resident night.*

*Waste production per tourist night compared to general population waste production per person (kg).*

*Percentage of local enterprises in the tourism sector actively supporting protection, conservation and management of local biodiversity and landscapes.*

### Revalue principle:

*Percentage of tourism enterprises using recycled water*.

## Appendix B: List of indicators taken from Deliverable 3.5.3: Circular Assessment Reports, Sant'Anna School of Advanced Studies (SSSA)

**Reduce principle:**

*Which is the percentage of separate municipal solid waste collection that has been achieved in the last year?*

*Which is the percentage of solid municipal waste that has been recycled and recovered in the last year?*

**Regenerate principle:**

*Which is the amount of money spent by tourism destination for the adoption of adaptation measures/solutions aimed to preserve the natural capital and eco-systems?*

**Rethink principle:**

*Has the tourism destination equipped itself with a continuous and well-structured supporting system to encourage the adoption of environmental and/or circular management systems within the tourism industries?*

*In the case the tourism destination has equipped itself with a sustainable and/or circular tourism policy/strategy, the decision making/development process related to this has foreseen a public consultation step?*

*Is an organizational structure specific for the development of a sustainable and/or circular tourism programme/strategy/action plan present within tourism destination?*

*Has the tourism destination elaborated an up-to-date, publicly available (e.g. available on tourism destination web-site, or other), multi-year law or policy or strategy or action plan dedicated to circular tourism (addressing circular, resources efficiency, a more circular mobility, etc.)?*

*Which is the percentage of tourism industries that have supported tourism destination in the promotion of campaigns, aimed to sensitize visitors on sustainable and circular issues?*

*Has the tourism destination elaborated proper guidelines, aimed to raise awareness of visitors during their own stay, regarding sustainable and circular issues and best practices to adopt (for example, through web sites, promotional material, etc.)?*

**Innovate/ Rethink principle:**

*Has the tourism destination equipped itself with a continuous and well-structured supporting system to encourage local economy?*

*Has the tourism destination equipped itself with a governance complex system (based on incentives, taxes and tariffs, market-based instruments, agreements, other) aimed to support the adoption of environmental and/or circular measures/technologies within the tourism industries?*

*Which is the amount of money (euro or other) spent for implementing a more sustainable and circular public mobility within tourism destination (compared to total amount of money spent for mobility development within tourism destination)?*

*Has the tourism destination addressed its purchasing power to choose environmentally friendly goods, services and works (Green Public Procurement – GPP)?*

*Which public infrastructure that supports sustainable and circular mobility is present within tourism destination?*

**Revalue/ Innovate principle:**

*How many km of the sewer system have been renovated/innovated?*

*Which is the amount of water losses in the water distribution network? (compared to the total amount of water supplied by the drinkable water distribution network within tourism destination)*

*How many km of the road network have been built or renovated according to circular criteria (e.g. by means of the use of secondary raw materials such as rubber powder or by-products, etc.)?*

## Appendix C: Summarised Metrics and Measures of the INCIRCLE Principles

Appendix C
Summarised metrics