

Circular Economy and the Tourism Sector in the EU and Greece

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Tourism: a key pillar of the EU and the Greek economy

- EU economy greatly depends on tourism. One out of ten enterprises in the European (non-financial) businesses in 2014 belonged to the tourism sector. Overall, **2.3 million enterprises** employed an estimated **12.3 million persons**. (Eurostat, 2017).
- Tourism is a key pillar of the Greek economy. Tourism GDP accounted for 6.8% of total GVA in 2017. The sector directly employed **381 800 people in 2018**, accounting for **10.0%** of total employment in the country (OECD, 2020)

Tourism's ecological footprint is constantly growing

- Land use, increasing demand on resources (water, energy, food)
- Transportation of tourists associated with greenhouse gas emissions and air pollution
- Waste/wastewater generation, air pollution, noise, greenhouse gas emissions, loss of biodiversity, ecosystem degradation

Seasonal concentration of Tourists, especially on islands, exacerbates the problems (examples: Santorini, Rhodes)

Key CE Principles and Tourism

- Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows
- Optimize resources yields by circulating products, components and materials in use at the highest utility at all times in both technical and biological cycles
- Foster system effectiveness by revealing and designing out negative externalities” (Ellen MacArthur Foundation)

Is it possible to achieve a circular tourism model? How?

What opportunities exist?

- Nature and biodiversity as well as culture are the main assets of the tourism business
- A circular tourism model can explore relations between culture/daily life and the environment
- The circular model addresses the flow of materials through supply chains. Therefore, it offers opportunities for collaborative business schemes at local level.
- It is much more resilient and offers long term profitability

What are the main obstacles to overcome?

- The linear model is still the mainstream approach
- Little attention on circular tourism by local and regional governments
- No differential promotion of circular hotels or tourist destinations based on circularity criteria – lack of circularity criteria and indicators
- Lack of strong incentives, environmental costs not included in the price

Accommodation: how to enhance circularity

- Buildings and Construction
- Refurbishing and Decoration
- Operations

How to enhance circularity in buildings and construction

Particular attention on buildings and construction as they offer a significant potential for circularity.

For example: Industrial building production, sharing buildings, multiple use buildings, use of locally available construction materials, elimination of toxic materials, easy dismantling, reuse and recycling of construction/demolition materials

How to enhance circularity in decoration and refurbishing

Buying or renting second hand/remanufactured furniture, electrical/electronic equipment, carpets, etc.

Reusing textiles: Converting damaged textiles into useful items. Reuse torn bedsheets, towels, Replace single use items such as napkins, tablecloths and handtowels with reusable items.

How to enhance circular operations

➤ Energy:

Electricity use in a typical hotel with no access to RES:

50% for Space heating/cooling – 6% of all operating cost

20% lighting

15% hot water provision

15% other services, cooking, catering

Proposed actions: Energy audit, energy management system to maximize energy efficiency and 100% Renewable Energy.

How to enhance Circular Operations

- Water, wastewater

In many cases potable water is used for all hotel functions – unnecessary consumption of quality water resources

- Laundry is the biggest consumer of water in hotels, often relying on potable water use.
- Reuse of grey water in laundry after treatment or reduced laundry frequency depending on the customer needs. Linen material is also affecting the water and energy consumption

How to enhance Circular Operations

Waste, with emphasis on food waste

- Food services: reducing food waste
Produce on demand, smaller portions, treatment of food waste etc
- Zero waste programs, waste separation

Interventions to increase circularity in accommodation

Accommodation				
Buildings/construction	Multiple use buildings	Sharing buildings	Green building design	Easy dismantling for reuse
Refurbishing/Decoration	Buying or renting remanufactured furniture	Reusing textiles	Replace single use items with reusable items	Eliminate toxic substances/synthetic fabrics
Operations/ Material flow	Address the supply chain to increase circular flow	Maximize energy efficiency	Water conservation Reuse of grey water	Zero waste programs – address food waste

How can tourism contribute to circular economy?

- Production oriented opportunities: reduction of the use of resources and saving costs (as previously described)
- Consumption oriented opportunity: depending on tourists' view on the journey experience and the bond created between tourists and local community.

Conclusion

Circular tourism business models create value through restoration, regeneration and reuse of resources and the shift from the traditional ownership model towards sharing economies. It represents a major opportunity for SMEs to become more competitive and contribute to local economies through collaborative schemes



Thank you for your attention!