



LOST IN THE FOREST OF CIRCULAR ECONOMY CERTIFICATES IN TOURISM SECTOR

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ABSTRACT: Circular economy represents a paradigm shift compared to the linear economy (producer, use and throw away). This offers the possibility of producing by reducing waste and even seeks mechanisms to reuse them. This concept allows companies to show more responsible behavior. Moreover, it is shown as a source of improvement and efficiency. Circular economy has been implemented for a long time in industrial sectors, but it is not so widespread so far in the tourism sector. However, it is known to be one of the sources of improvement available to tourism companies, and in the last few years, these types of companies are showing great interest in adopting it. One of the difficulties for them is finding the right way to adopt specific measures. One of the paths that help companies to make their efforts more effective and also more visible is going for an official certificate that may show their stakeholders that they are consistent with circular economy principles. For this reason, most of the companies implementing circular economy also seek the reward of the visibility that a certification gives. However, many tourism companies feel lost in the forest of the huge amount of certificates available nowadays in the market, which supposedly analyze and identify such behavior. This article tries to shed some light to help companies within this context.

Keywords: *Circular economy, Hospitality industry, Certificate*

1. INTRODUCTION. CIRCULAR ECONOMY.

There are many definitions of circular economy in the scientific literature. (Kirchherr et al., 2017; Vinante et al., 2021). Opposite to the traditional idea of linear manufacturing, based on extracting, manufacturing, using, and throwing away, circular economy also

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includes some other steps such as designing without generating waste or pollution. (European Commission, 2020). The integration of a circular economy in the activity of companies can mean an increase in competitiveness for the company itself since their resources are optimized and their waste is reduced. At the same time, society and the environment also benefit from these actions.

Among all the studies on circularity, this work relies on the work done by MacArthur Foundation (MacArthur, 2013), which uses three fundamental principles on which circularity is based:

- 1.- Eliminate waste and pollution
- 2.- Circulate products and materials
- 3.- Regenerate nature

These three general principles can be better concretized and developed through the concept of the “Rs”. The first models initially considered 3 R's (Reduce, Reuse and Recycle) (Campbell et al., 2020). This concept evolve over the year and the 3 R's were expanded to 7 (Reduce, Reuse, Redesign, Repair, Recondition, Recover and Recycle). (Araujo-Morera, et al, 2021; Universitat Politècnica Valencia, 2022).

The model has evolved even more, and the most recent studies increase R's in their development by up to 10 (Recover, Recycling, Repurpose, Remanufacture, Refurbish, Repair, Re-use, Reduce, Rethink, Refuse.) (Morseletto, 2020).

2 APPLICATION TO THE TOURIST SECTOR

The circular economy applied to the tourism sector is based on three main strategies (Ghisellini et al., 2015) 1.- Conservation and improvement of natural resources.

- 2.- Resource optimization
- 3.- Promotion of efficiency.

These main strategies are based on the initial three R's (Reduce, Reuse and Recycle). Subsequently, these strategies have been expanded to include more Rs in the tourism sector (Redesign, Remanufacture, and Recover).

In the specific case of the tourism industry, efforts are concentrated above all on energy and water saving and promoting recycling in all its possible versions. Although these initiatives are not considered circular economy per se, the pioneers in sustainability in the tourism industry have started with them, and it has been demonstrate their contribution to circularity in the sector. Some examples can be cited of the first steps taken in the circular economy for instance Manniche et al. (2017) analyzed the situation of circular economy in tourism in the Baltic region and found that many hotels had carried out sustainability practices for many years and its transition to increasing its circularity is observed above all by adopting reduction strategies.

Recently, other authors point to eco-innovation as responsible for the first steps taken

towards a circular economy model. Alonso-Almeida et al. (2017) analyzed the degree of eco-innovation in four industrial sectors and identified tourism as the most involved. Some of these eco-innovations could be ideally identified as circular economy practices, such as the utilization of rainwater or geothermal energy and electric vehicles for internal transport.

Manniche et al. (2017) found some initiatives related to the circular economy in hotels about its construction, reforms, and redecoration of their operational services. Vourdoubas (2016) studied in Greece the use of renewable energy sources for the tourism sector. Girard and Nocca (2017) explained some additional examples in Italian hotels, such as electric buses and km 0 menus. These strategies allow CO₂ emissions to be reduced and present a differentiation model based on sustainability (Alonso-Almeida et al., 2017).

Regarding water, elements of control and efficiency are found above all in places where it is scarce, or is a costly resource, for example, in Morocco (Alonso-Almeida, 2012). Finally, regarding waste management (Deselnicu et al., 2018), many hotels have developed strategies to improve such management. Florido et al. (2019) affirms in this sense that these reuse and reuse strategies certainly contribute to the circular economy, much more than recycling itself, because waste is reduced at the source. Other authors relate collaborative consumption strategies between different industries (Singh & Giacosa, 2019). Manniche et al. (2017) recommend after analyzing several cases in the Baltic region that environmental management systems be adopted and water management. In this sense, they suggest responsible cleaning services in the short term, and in the long term, they even recommend investments in improving the management of gray water.

Regarding restaurants, these same authors point to them as a key player in reducing food waste, thus suggesting the redesign and planning of menus to reduce waste, reuse leftover food as much as possible, and even expand distribution networks or collaborative economy platforms when necessary. Although research in this regard is scarce, it can be affirmed that the tourism industry is slowly incorporating circular economy practices and evolving on the first applied sustainability practices, incorporating innovations, especially in energy, water, and the reduction of all kinds of waste.

3. MEASUREMENT OF CIRCULAR ECONOMY BEHAVIOR.

One of the most critical questions is to verify how the circular behavior of companies could be evaluated. We have proceeded to carry out a bibliographic search in the academic literature in this regard. For the manufacturing sector, there are some examples,

for instance, Kumar, et al. (2019) evaluate the impact of the circular economy in the manufacturing sector. Indicators have also been developed for the industrial sector that allow measuring the degree of involvement in the circular economy, even developed by countries at a macro level, such as for China in (Geng et al., 2012).

However, the literature that has been found on circular economy is mainly developed for the manufacturing sector, and only a few references are found in the tourism sector, even though it is said sector consumes enormous amounts of energy and water, produces a lot of food waste and causes a lot of CO₂ emissions as well (Rodríguez et al., 2020). An isolated example of this fact is the work of Hernández & Yagui (2021) which identifies the circular behavior in tourism companies in Peru according to the Global Reporting Initiative. The Global Sustainability Standards Board has developed this certificate. This identifier is simply one of many found to measure some aspects related to the circular economy.

4. CERTIFICATIONS FOUND

We have searched for and classified certifications that allow us to identify circular behavior by analyzing them. There is not a single certificate that can demonstrate such behavior; on the contrary, many certificates, certificates, and accreditations have been found that could indicate part of the circular behavior or at least some aspect related to them. Many of these certificates are developed by private, public, and non-profit organizations. Many offer certification services, and some have even developed mechanisms and documentation that allow self-certification by companies.

In the tourism sector, many certificates certify environmental behavior, basically, they analyze environmental behavior to different degrees and scales as it can be seen in table 1.

Table 1. Certifications in environmental management specific to tourist industry

Certification of environmental management for the tourist industry.
Actively Green Standard
Asian Ecotourism Standard for Accommodations (AESAs)
Bioscore
BIOSPHERE
Booking Accommodations of the sustainable travel program.
Certificate "S" (ICTE)
EarthCheck
Eco hotels tripadvisor
European Ecotourism Labeling Standard (EETLS)
GREEN GLOBE

Certification of environmental management for the tourist industry.
Green Key Global (Foundation for Environmental Education)
Green Step
Green Tourism
Green Tourism Active
Greenview Portal
Hilton LightStay
Hostelling International's Quality and Sustainability Standard (GSTC)
Sustainable Hotels Certificate (HES)
Travelife (Travel agencies)

Although we have also found other certificates, many of them originally come from industrial sectors. Nevertheless, they are applicable, and we have found evidence of tourist companies that have been certified in them. These certificates are also related to specific environmental aspects, energy efficiency..., which are also identified as circular economy behavior. They have been classified and ordered according to the related aspect. This information is grouped and sorted, and the results are shown in table 2.

Table 2. General environmental certifications applied in the tourism sector

Certificate	Reuse	Proximity	Residues reduction	Water footprint	Energy efficiency	Carbon footprint	Environmental impact of the product		
							Environmental impact of the product	Global environmental management	
0 km stamp (Ivac)		X							
Breeam					X				
Carbon neutrality certification							X		
Carbon Proof							X		
Certificate of recyclability (Ivac)			X						
Cradle to Cradle	X								
EMAS							X	X	X
Energy Star					X				
Global Report Initiative								X	
Green Certificate								X	
ISO 14001 (Environmental management system)									X
ISO 14046 Water footprint				X					
ISO 14064 / 14065 Carbon footprint							X		
ISO 50001 (Energy management system)					X				
IVAC Recyclability and residues			X						
Residues as non residues (Ivac)			X						
Zero food waste (Aenor)	X		X						
Zero waste (aenor)			X						

4 CONCLUSION AND PLANNED NEXT STEPS

As can be seen from the information above, there are many certificates available to certify aspects related to the circular economy: many cover environmental aspects, others energy efficiency, waste reduction, and proximity. In short, individual aspects. We have not found any that relate to a broad circular behavior. We think that this fact makes the visibility of the circular economy very difficult and therefore it is an obstacle for companies that have these concerns and would like to show their behavior.

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