

The impact of Environmental Management System in Hospitality Industry to the transition to Circular Economy

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The hospitality sector, encompassing establishments such as hotels, restaurants, canteens, casinos, airlines, and tourist attractions, holds considerable global economic and labor significance. It stands out as one of the most influential industries, impacting the economy, environment, and society at large (Amicarelli and Bux, 2023). The tourism industry accounted for 9.6% of the global GDP in 2019, providing employment for 333 million people. Over the past decade, international arrivals have surged from 900 million to over 1.4 billion, with projections exceeding 2.7 billion by 2027 (Statista, 2022). Despite being a pivotal driver of economic growth and one of the rapidly expanding sectors, the hospitality industry faces recurrent criticism for its unsustainable practices (Xu et al., 2022). Notably, it significantly contributes to greenhouse gas (GHG) emissions, with 5% of global carbon emissions attributed to tourism. Among these, 75% are linked to transportation, 21% to accommodation, and 4% to other activities (Irfan et al., 2023). The development of tourism, in particular, disrupts the balance of tourism destinations, primarily due to waste generation, consumption of local resources, and the construction and operation of various facilities, often concentrated in the summer season to meet tourist demands (Voukkali et al., 2021).

These challenges are necessary to be addressed in the context of the Circular Economy model, the European Green Deal (EGD), and the Sustainable Development Goals (SDGs) (Voukkali et al., 2023). Specifically, sustainable practices within the industry can mitigate marine pollution (SDG-14 Life Below Water), reduce energy consumption from industrial activities (SDG-7 Affordable and Clean Energy), and contribute to the formation of sustainable cities and communities (SDG-11) by promoting responsible consumption and production of raw materials (SDG-12) (United Nations, 2015). However, achieving the targets set by these strategies requires collaboration from various stakeholders, including national and local authorities, policymakers, sector experts, the academic and research community, society, and travelers, to implement the key principles of sustainable development (Eliades et al., 2022; Rodríguez et al., 2020). This progressive approach should be grounded in the adoption of Environmental Management Systems (EMS) such as ISO 14001 and EMAS principles, coupled with the embrace of "R" strategies, including reuse, recycle, remanufacture, redesign, recover, and prevention, among others (Papamichael et al., 2023).

In general, there is a surprising lack of understanding of circular economy in circularity, often viewed as merely waste management frameworks within broader concepts of sustainability (Voukkali and Zorpas, 2021). This oversight neglects the model's holistic systemic and system redesign potential. To successfully implement a circular economy approach, hotel managers must gain a comprehensive understanding of all available actions through a circular economy perspective (Ben Youssef and Zeqiri, 2022). Training employees at all levels within hotels on circular economy principles could yield a powerful multiplier effect within organizations. Therefore, education emerges as a pivotal tool in bridging the gap between theory and practice, enabling the redesign of hospitality operations in alignment with circular economy principles (Eliades et al., 2022).

In this context, an EMS play a crucial role in supporting this educational necessity (Biancardi et al., 2023). Both ISO 14001 and EMAS serve as tools to help organizations control and minimize their environmental impacts. However, a noteworthy observation is the necessity to adapt existing EMS to effectively manage circular initiatives. This adaptation offers enterprises an opportunity to systematically engage with circular economy principles, enhancing the benefits derived from having an EMS (Zhao et al., 2022). EMS is recognized as a fundamental requirement for systems related to education, training, and awareness. Simultaneously, the importance of EMS adaption in the hospitality sector lies in the necessity for transparency, communication, and integration, in accordance with various

guidelines such as ISO 14000 which could lead to substantial reductions, improved efficiency, simpler management systems, increased client trust, enhanced image, and the attraction of new clients (Amicarelli and Bux, 2023).

The purpose of the current study is to shed light on how compliance with EMS requirements could support the hospitality industry in transitioning to a circular economy model. Emphasis is being given on the implementation of specific procedures of EMS that can be a powerful tool in achieving the goals of the circular economy and changing the existing practices applied by tourism sector in order to reduce their environmental consequences. Through a general literature review (using PRISMA statement), a pathway for linking the integration of EMS with circular economy key aspects is presented, supported by previous scientific work of the hospitality sector. Given the inadequacies of the existing tourism and hospitality structure, which is economically and environmentally unsustainable, there is a pressing need for an alternative future. Embracing a new mindset under the circular economy, with a focus on reducing core production and operational costs while mitigating the adverse impacts of operations, presents an attractive possibility.

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