RESEARCH ARTICLE



Circular economy and waste production models for sustainable development goals 12 and 14: Evidence from cruise sustainability reporting

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Abstract

The relationship between the practices and initiatives governing "waste production models" (sustainable development goal [SDG]12) and marine biodiversity goals (SDG14) is relatively unexplored. Aiming to bridge this gap by drawing on stakeholder and legitimacy theories, this study examines onboard cruise ships' circular economy (CE)-based waste management practices and initiatives, correlating SGDs 12 and 14. Consequently, Carnival Corporation Plc's 2020-2022 sustainability reports are analyzed using content analysis by both Leximancer software (ver. 5.0) and manual methods. The results highlight the corporation's increasing commitment to green technologies for "waste production models" to achieve SDG14. However, its sustainability reports provide unclear evidence of the impact on marine biodiversity. Findings implies that practitioners should partner and invest in green technologies for "waste production models" to achieve SDG14. Besides being the first to explore the link between the two SDGs within the CE framework, this study advances insights into waste management within "waste production models," enhancing the understanding of sustainable practices.

KEYWORDS

circular economy (CE), green technologies, marine biodiversity (SDG14), sustainable development goals (SDGs), waste production models (SDG12), waste reporting cycle

INTRODUCTION 1

Circular economy (CE) is recognized worldwide as a crucial framework for addressing environmental issues and promoting sustainable development. Its resource efficiency and waste reduction principles are driving international efforts towards a more resilient and environmentally responsible economic system (World Bank, 2022; World Customs Organization, 2022). Environmental impact resulting from unsustainable resource exploitation and management has spurred the European Union (EU) to advocate for a CE (Trica et al., 2019), as it reduces resource wastage and minimizes environmental harm by applying the principles of recycling, reuse, and waste reduction (Geisendorf &

Pietrulla, 2018). To urgently respond to environmental impact, the EU has introduced several directives and regulations, including the "circular economy package" in 2015, "waste framework directive" (2018/851), "single-use plastics directive" (2019/904), and the "circular economy action plan," underscoring their dedication to cultivating a greener economic environment by establishing shared recycling targets and encouraging the creation and manufacture of environmentally friendly goods (Hughes, 2017; Mazur-Wierzbicka, 2021; Stankevičius et al., 2020; Syberg et al., 2021).

These regulatory measures have prompted firms to reconsider their production, consumption, and product disposal approaches, giving rise to circular business models (Cristoni & Tonelli, 2018; Gusmerotti

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