
The role of beach litter in overall beach quality assessment

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Abstract

Beaches have several environmental, social, economical, and scientific interests. Eight scientific articles (2004-2021) regarding beach classification indexes were analyzed regarding beach litter parameters. We also evaluated the Blue Flag checklist for beach certification and Projeto Orla guidelines, which is the official beach management tool in Brazil.

All these methodologies and tools bring beach litter as a parameter to composing the beach quality. In the Blue Flag criteria, litter is a recurring theme, and beach litter and the structure for management and monitoring of beach litter are evaluated in the checklist. In Projeto Orla guidelines beach litter is present as an example of actions and measures to improve beach quality. In scientific literature, beach litter can appear as litter on the beach and/or as waste management strategies on the beach. However, the nomenclature of types of beach litter and the measurement units are not standardized (e.g.: GESAMP, UNEP, or NOAA).

Regarding beach litter, parameters such as solid waste, floating debris, and litter can be used. Although the measurement unit varies. Waste management on the beach can appear as the following: a number of garbage collectors on the beach, and the beach area affected. Is it not possible to establish patterns of how marine litter is used in beach classifications. However, the presence of beach litter is always associated with downgrading beach classification and the presence of waste management strategies on the beach is evaluated as a positive indicator of beach quality.

This study highlights the importance of beach litter as a parameter of beach classification, certification programs, and in national coastal management methodologies. Beach litter influence beach quality assessment results, especially regarding touristic/leisure attractiveness. Although there is a gap in finding data about marine litter to feed beach classification methodologies through time, especially in emerging economies.

Keywords: Beach management, quality index, coastal zone, marine debris, pollution.

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