Mapping the Technological Interventions to the National Action Plan for Marine Litter Management 2018-2025: Addressing the Marine Plastic Litter at the Marine Tourism Destinations in Indonesia

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Abstract : This study aims to provide recommendations for addressing marine plastic litter at the ocean tourism destinations in Indonesia sustainably through technological interventions in the framework of the National Action Plan for Marine Litter Management 2018-2025. In Indonesia, marine tourism is a rapidly growing economic sector. However, marine tourism destinations are facing a global challenge called marine plastic litter. Marine plastic litter is a threat to those destinations since it has potential impacts on the reduction of marine environmental sustainability, the health of tourists and local communities as well as tourism business income. Since 2018, the Indonesian government has passed and promulgated the National Plan of Action on Marine Litter Management 2018-2025. This national action plan consists of three important key aspects of interventions (i.e., societal effort, technological application, and institutional coordination) and five strategies for addressing marine litter in Indonesia, in particular, to address 70% of marine plastic litter by 2025. The strategies include 1) National movement for raising awareness of stakeholders, 2) Land-based litter management, 3) Litter management at the sea and coasts, 4) Funding mechanism, institutional strengthening, monitoring, and law enforcement, and 5) Research and development. In this study, technological interventions around the world and in Indonesia are reviewed and analyzed on their relevance to the national action plan based on five criteria. As a result, there are twelve kinds of technological interventions recommended to be implemented for addressing marine plastic litter in the marine tourism destinations in Indonesia.

Keywords: marine litter management, marine plastic litter, national action plan, ocean sustainability, ocean tourism destination, technological interventions

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