6MECM001W.2 Digital Media Project research report

Marine Pollution and Sustainable Development Goal 14 in the Asia-Pacific Region: Level of Implementation, Challenges and Future Strategies.

Introduction

UN 2030 Agenda and Sustainable Development Goals outline a brighter, more sustainable future for everybody. The agenda tackles global issues. This report provides Asia-Pacific efforts to meet the UN Sustainable Development Goal 14 'Life Below Water' (SDG14) by 2025. It assesses whether Asia-Pacific can meet SDG14.1 to end marine pollution by 2025. It finishes with Asia-Pacific SDG14 implementation suggestions. Section 2 describes this study's research and secondary analysis using UN ESCAP and Dasgupta (2020) data. Section 3 analyses statistics, activities, and difficulties in Asia-Pacific countries and makes future recommendations. The Asia-Pacific region will not be able to achieve SDG 14.1 by 2025.

Methodology

Survey research increasingly uses current data as academics globally collect and archive enormous amounts of data (Johnston, 2014). This report focuses on the UN Economic and Social Commission for Asia and the Pacific's 2023 research data, Mao et al.'s (2019) research article, and Dasgupta's (2020) report for secondary analysis and collation.

Secondary data analysis involves analyzing secondary sources and data from others in a particular field (Johnston, 2014). This study can quickly acquire specialized data and make practical recommendations for the Asia-Pacific region to eliminate plastic pollution using secondary data. But，Secondary data analysis in this study has constraints, including the possibility of needing more research information to verify the data sources.

Results

The UN General Assembly approved 17 SDGs for the 2030 Agenda 2015, including SDG 14, "Life Below Water" (Acharya, 2023). By 2025, governments must significantly reduce marine pollution, mainly plastic and land-based marine debris (Dasgupta, 2020). Asia and the Pacific's 2025 SDG 14 marine pollution reduction objective is examined here.1. Asia and the Pacific are varied with 4.5 billion people (UNESCAP et al., 2019). Seafood and tourism are essential in Asia, but marine pollution from related sectors and land-based activities has raised concerns. The leading cause of marine pollution is plastic.

Rhodes (2018) claims that 79% of the 6.3 billion tonnes of plastic waste produced between 1950 and 2015 entered the oceans. Plastic litters beaches, oceans, bays, and estuaries. Plastic pollution can kill marine life that eats or tangles (Borrelle et al., 2017). Further research has demonstrated that microscopic plastic fragments are everywhere in marine ecosystems, even in salt and seafood, and that plastic pollution threatens global food safety and health.

The more considerable science and technology challenge is that machines' lack of ability to collect and measure plastic in the ocean has resulted in less than 1% of the data currently collected being used to estimate how much plastic has been put in over time. In Asia-Pacific, China, Indonesia, the Philippines, Vietnam, and Sri Lanka contribute 56% of the world's plastic garbage and are the top marine plastic polluters (Rhodes, 2018). Pollution has degraded China's nearshore waterways, causing seasonal toxic algal blooms and hypoxia (Mao et al., 2019). The Ocean Plastic Recycler (OPR) is a revolutionary marine pollution solution made possible by the latest artificial intelligence robots and sensor systems. Jaiganesh and Dr. Harini Mittal (2023) report that the OPR can efficiently gather 7 million pounds of marine plastic garbage per cycle. Asia-Pacific nations cannot meet the SDG14.1 objective in 2025 due to their pollutants' scale and cyclical nature. This analysis implies that Asia-Pacific countries can buy OPR as needed and may be able to meet SDG14.1 in

the future with new technologies.

In 2018, China banned the import of all non-industrial plastic garbage to accomplish SDG14's target of protecting the domestic marine environment. However, this led to a surge in plastic waste exports from high-income countries to Southeast Asian underdeveloped nations (Dasgupta, 2020). Example: Indonesia. Jakarta Bay, Indonesia, has over 15% of personal protective plastic equipment in a 2020 survey (Sharma, 2021).

The COVID-19 epidemic has increased single-use plastics. Direct littering, ocean dumping, and trash disposal introduce massive plastic gadgets to the marine . As one of the top trash importers in Southeast Asia, Indonesia must deal with much marine debris, yet the government cannot handle the plastic waste, which ends up in the ocean.This study suggests that such countries address waste pollution with the UNEP 2016 Guidelines for Framework Legislation for Integrated Waste Management (Environment, 2016) and UN COVID-19 regulations. The study suggests that these countries can use the UNEP 2016 Guidelines for Framework Legislation for Integrated Waste Management (Environment, 2016) and the UN COVID-19 integrated waste management policy regulations to provide a reasonable legal system for relevant sectors to manage and deliver waste in the future and meet SDG14.

According to studies, Southeast Asia's coastal and shallow waters support widespread mangrove, seagrass, and coral habitats—however, marine plastic garbage entanglement and adhesion impact local hydrology (Sharma, 2021). Many coral colonies die from "coral bleaching" (Acharya, 2023). Indonesia has worked with local people to preserve the Coral Triangle's ecological resources to meet SDG 14.1.but it is difficult. A lack of environmental awareness and pollution prevention expertise among locals and stakeholders has stopped Indonesia from solving the marine plastic pollution problem. UNESCO's coral reef and hypoxic dead zone awareness campaign should be replicated in Asia-Pacific countries. According to UNESCO's ESD aims, this paper suggests organizing communities to educate and promote knowledge and environmental activities to protect coral reefs (UNESCO, 2017). This will aid in SDG14 completion.

Conclusion

In conclusion,This report concludes that Asia-Pacific will not meet SDG 14.1 by 2025. Marine plastic pollution data and Asia-Pacific sustainable development policies are examined in this paper. The lack of in-person data-gathering sources limits the accuracy of this report. The study suggests that Asia-Pacific uses robotic AI techniques and technology (Henrik Skaug Saetra, 2022) to speed up marine plastic treatment. The Asia-Pacific area should follow UN laws and encourage local communities to support marine conservation and social education (UNESCO, 2017). The public and stakeholders can reduce plastic trash and debris emissions daily through education. The Asia-Pacific area should be able to clean up marine plastic trash more fully in the future, and we can build a better future for humanity and fulfill SDG14.

Reference List

Acharya, J. (2023). Marine Pollution and SDG 14 Implementation Degree of Challenges and Combat Strategies. *IIRE Journal of Maritime Research and Development*, 7(2).

Borrelle, S.B., Rochman, C.M., Liboiron, M., Bond, A.L., Lusher, A., Bradshaw, H. and Provencher, J.F. (2017). Opinion: Why we need an international agreement on marine plastic pollution. *Proceedings of the National Academy of Sciences*, [online] 114(38), pp.9994–9997. doi:https://doi.org/10.1073/pnas.1714450114.

Dasgupta, J. (2020). *SDG 14: stepping up international efforts to tackle ocean plastic pollution.* Freedom from Fear, 2018(15), pp.74-79.

Environment, U.N. (2016). *Guidelines for Framework Legislation for Integrated Waste Management*. [online] UNEP - UN Environment Programme. Available at: https://www.unep.org/resources/report/guidelines-framework-legislation-integrated-waste-management.

Harris, P.G. (2022). *Routledge Handbook of Marine Governance and Global Environmental Change*. Taylor & Francis.

Jaiganesh, S. and Dr. Harini Mittal, P.D. (2023). Towards a Sustainable Ocean Ecosystem: Innovations in Plastic Pollution Mitigation, Policy Collaborations, and Technological Advancements. *Journal of Student Research*, 12(4). doi:https://doi.org/10.47611/jsrhs.v12i4.5856.

Johnston, M.P. (2014). Secondary Data Analysis: A Method of which the Time Has Come. *Qualitative and Quantitative Methods in Libraries*, [online] 3(3), pp.619–626. Available at: https://qqml-journal.net/index.php/qqml/article/view/169.

Mao, Z., Xue, X., Tian, H. and Adi , U.M. (2019). *How will China realize SDG 14 by 2030?—A case study of an institutional approach to achieve proper control of coastal water pollution.* Journal of environmental management, 230, pp.53-62.

Rhodes, C.J. (2018). Plastic Pollution and Potential Solutions. *Science Progress*, 101(3), pp.207–260. doi:https://doi.org/10.3184/003685018x15294876706211.

Sharma, P. (2021). *Marine Plastic Pollution in Indo-Pacific:'Together'for Better 'Future'. S. SIvakumar and Prakash Sharma,"Marine Plastic Pollution in Indo-Pacific:'Together'for Better 'Future,.* 11(2), pp.129-167.

UN.ESCAP, Programme (UNEP), U.N.E., Services (UNOPS), U.N.O. for P., Organization (UNIDO), U.N.I.D., Programme (UNDP), U.N.D., Center (SEAFDEC), S.A.F.D., Council (UNHRC), U.N.H.R. and Women), U.N.E. for G.E. and the E. of W. (UN (2022). SDG 14 : Life below water : conserve and sustainably use the oceans, seas, and marine resources for sustainable development. *repository.unescap.org*. [online] Available at: https://repository.unescap.org/handle/20.500.12870/4319.

UN.ESCAP, Resources (IUCN), I.U. for C. of N. and N., Commission (IOC), I.O., United Nations Educational, S. and C.O. (UNESCO) and Programme (UNEP), U.N.E. (2019). SDG14: life below water : navigating life below water in Asia and the Pacific. *repository.unescap.org*. [online] Available at: https://repository.unescap.org/handle/20.500.12870/1139.

UNESCO (2017). *Education for Sustainable Development Goals: learning objectives*. [online] Unesco.org. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000247444?posInSet=1&queryId=eb7ff3aa-ea83-4d97-adf7-1c945fd5e1a3.

United Nations (2023). *The Sustainable Development Goals Report Special Edition 2023*. [online] *United Nations*. United Nations. Available at: https://unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023.pdf.