Ecotoxicological studies of micro & nano plastics, on its vectorization of other pollutants and synergistic impact of nano-plastics and ocean acidification-A microcosm approach

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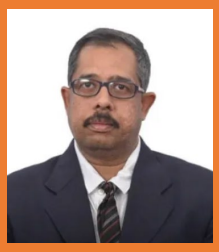

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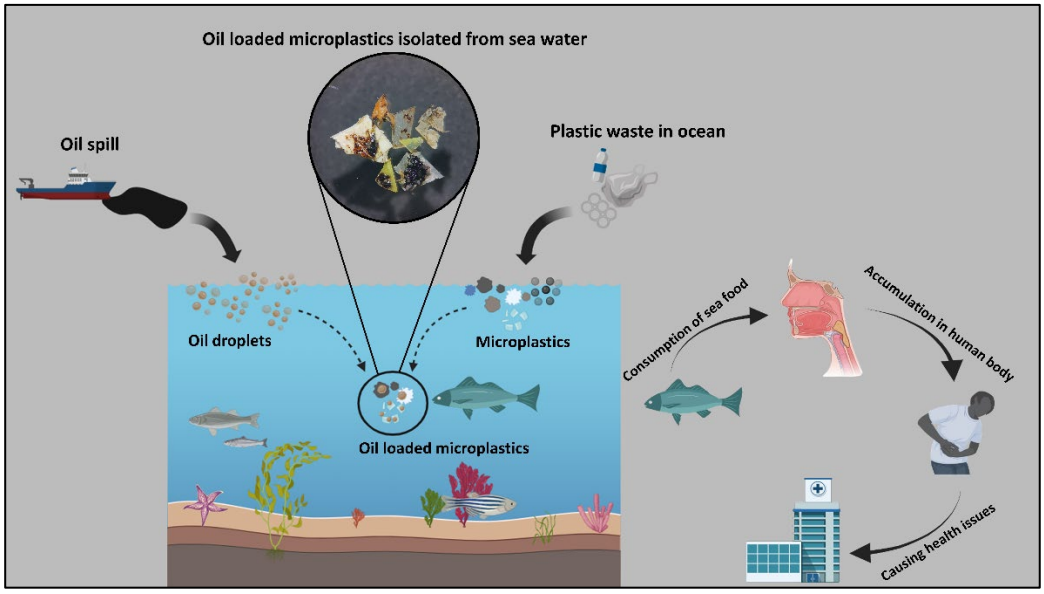
Name of the Funding Agency
Ministry of Earth Sciences

Name of the Scheme
Ocean Observations and Information Services (OOIS)

Sanctioned Amount (in Rupees)
Rs. 24,77,120

Duration of the Project (years)
3

Graphical Abstract/ Lavout



Project Description: (Restricted to 150 words):

Micro and nano plastics (MNPs) are significant environmental pollutants, impacting aquatic ecosystems through their role as vectors for other hazardous substances, including persistent organic pollutants (POPs) and heavy metals. These particles facilitate the adherence and transport of these contaminants, leading to bio-accumulation in marine organisms and potential health risks to humans.

Using microcosms (controlled ecological systems) researchers examine the interactions between MNPs, pollutants, and ocean acidification. This approach will reveal the intensified toxic effects of combined exposure of these stressors on marine organisms. A comprehensive understanding of these dynamics is crucial for developing strategies to mitigate the risks posed by MNPs and acidification. Future studies should prioritize long-term observations and the creation of advanced predictive models to evaluate the combined effects of these pollutants under varying environmental conditions.

Products/ Instruments/ Results/ Outreach Activities (Pictures)