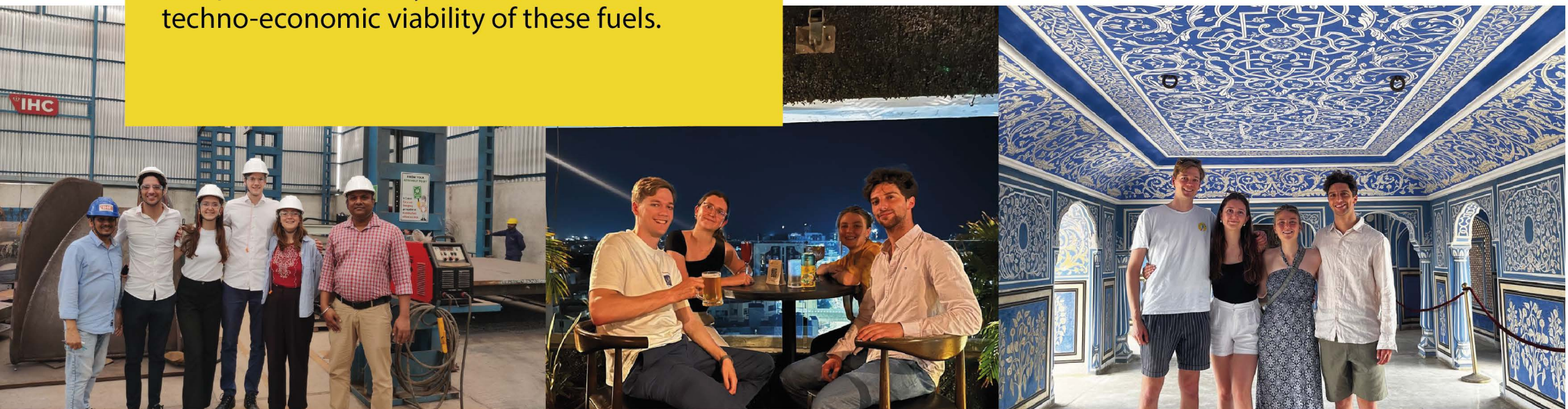




Exploring the Potential of Renewable Maritime Fuels in India

With the growing shift towards renewable maritime fuels, International Seaport Dredging (ISD), the Indian subsidiary of DEME, tasked IRP with evaluating the best sustainable fuel options for its dredging fleet in India. Our comprehensive study focuses on the techno-economic viability of these fuels.



APPROACH

To provide ISD with a solid business case, we investigated the regulatory landscape, fuel availability, and logistics of transitioning to sustainable fuels. Over 7 weeks, we conducted ~20 interviews. This included gathering key insights from the Ministry of Ports, Shipping and Waterways of India, interviewing and visiting two ports, and a field trip to board one of ISD's dredging vessels. Starting with nine fuel options, we shortlisted the top two based on sustainability, cost, supply, and technological maturity. These were compared against the current fleet's baseline and the feasibility of retrofitting an existing vessel from their fleet to a dual-fuel system.

RESULTS

After conducting the interviews with key stakeholders, we gathered, analyzed, and evaluated the data to assess the feasibility of ISD's adopting sustainable fuels.

Our findings were consolidated into a comprehensive slide deck, which presents a detailed analysis of the two most promising fuels. The slide deck examines each fuel's supply chain, future availability, cost implications, and technical feasibility. We also explored the logistical challenges of retrofitting existing vessels, considering conversion timelines and cost-efficiency.

This research culminated in practical recommendations for ISD, including a clear comparison between their current fuel usage and the benefits of transitioning to dual-fuel engines. For this transition we presented two options: one fuel type that can be implemented and operated on in the short-term, and a second, more medium to long-term, option which provides a lot of potential but comes with slightly more uncertainties.

As a result, ISD now has a clear roadmap for integrating renewable fuels into its operations, positioning the company to lead in sustainability while maintaining competitiveness in the rapidly evolving Indian maritime sector.

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