

Eco Edge Consulting

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
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Topic Title: Rice to the Rescue: A Sustainable Solution to Bangladesh's Sand Mining Crisis

Audience: Holcim Bangladesh Ltd., the Bangladeshi subsidiary of the global construction materials company Holcim.

Sustainable Development Goal

SDG #12: (Ensure sustainable consumption and production patterns)

SDG #14: (Conserve and sustainably use the oceans, seas and marine resources for sustainable development)

Executive Summary

The global sand mining crisis has led to severe environmental and economic consequences, particularly in Bangladesh. Illegal sand mining, driven by weak regulations and corruption, leads to riverbank erosion and widespread environmental degradation. It has caused the destruction of farmland, fishing zones, and critical infrastructure like roads and schools, costing the government billions in damages. As Bangladesh undergoes a shift toward stronger environmental governance and sustainability-focused policies, there is a growing opportunity to curb illegal sand extraction and invest in alternative materials. Eco Edge Consulting proposes Rice Husk Ash (RHA), a byproduct of Bangladesh's 39.3 million-ton annual rice production. Currently underutilized, RHA presents a scalable and cost-effective alternative to sand in construction materials like cement.

We recommend that Holcim Bangladesh Ltd., the local subsidiary of Holcim, a global leader in building materials and sustainable construction, invest in RHA by purchasing waste RHA from local producers and reselling it to material companies that typically use sand in construction products. By integrating RHA into the supply chain, Holcim can position itself as an industry leader in sustainable construction while reducing demand for illegally mined sand. This initiative presents a profitable, job-creating, and environmentally responsible investment. Additionally, supporting an RHA-based supply chain would align with Bangladesh's shifting regulatory landscape, allowing Holcim to strengthen government partnerships, enhance corporate sustainability efforts, and secure long-term market growth. By leveraging this abundant, eco-friendly resource, Holcim can establish itself as a key player in sustainable construction while helping the country transition toward a more regulated and environmentally responsible economy.