

Micro-bubble barriers for coastal silt management and noise protection

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Rationale

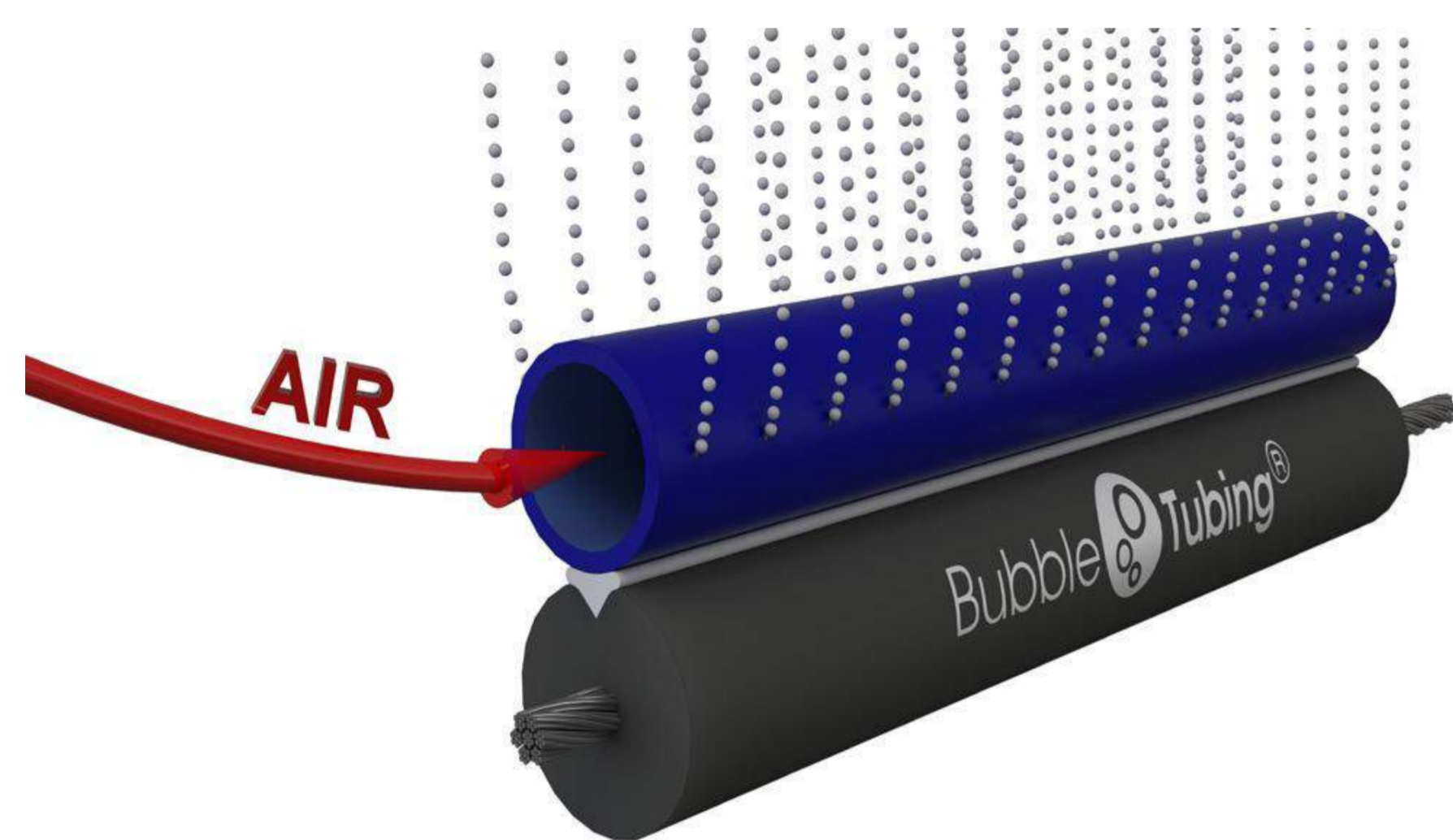
Construction, dredging and restoration activities create environmental risks for the marine environment. These range from sediment disturbance and dispersal to noise pollution. Disturbances can negatively impact the ecological status of seafloor communities and water quality, and construction noise through pile driving and other activities can be detrimental for fish and marine mammals.

Objective

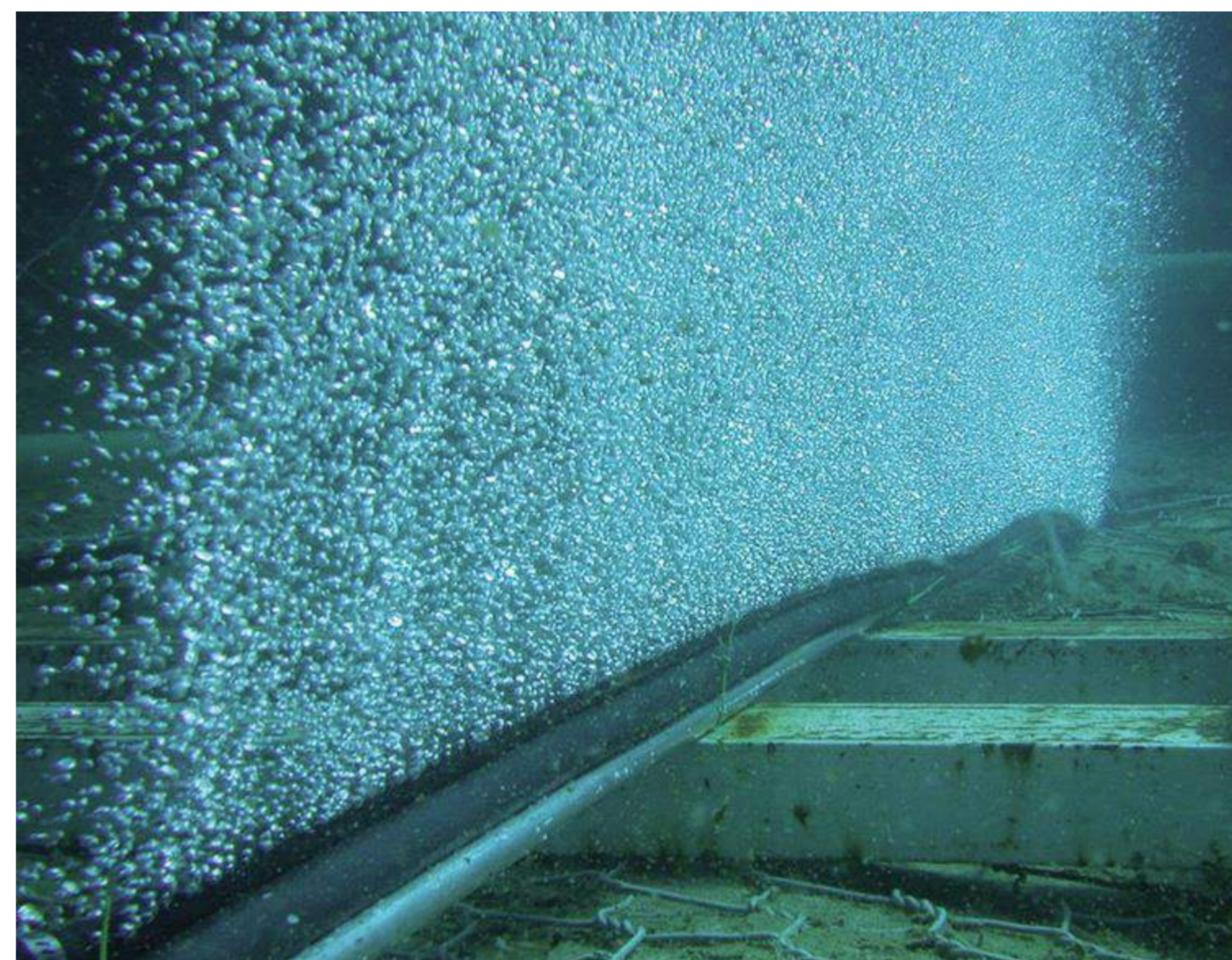
The objective of this project is to test the effectiveness of Bubble Tubing™ to mitigate construction impacts. In laboratory experiments the amount of marine sediment contained by bubble curtains is quantified as well as the muffling of construction noise.

Bubble Tubing™

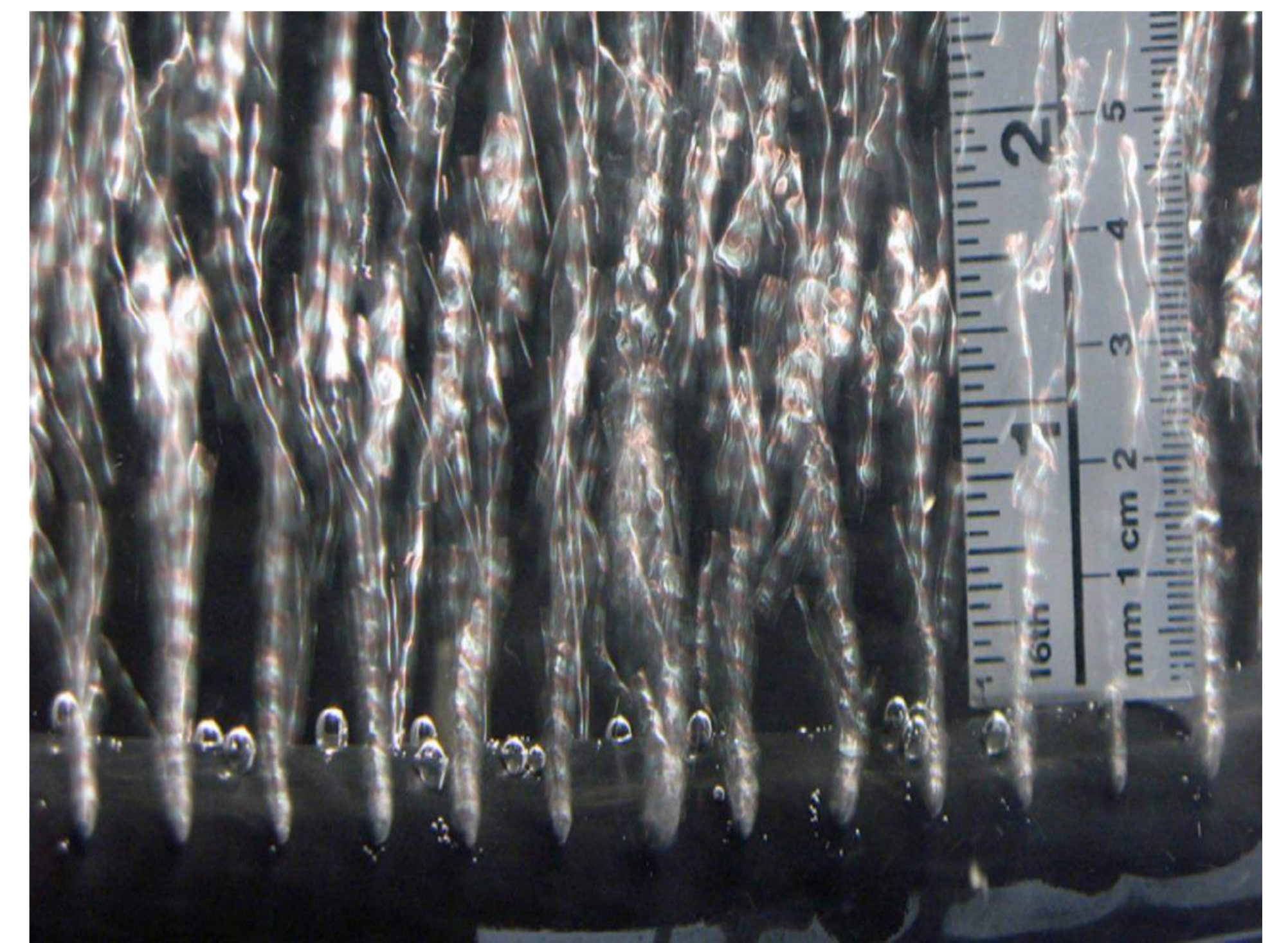
Frog Environmental uses Bubble Tubing™ to manage environmental risks in freshwater systems. Bubble Tubing™ releases micro-bubbles which form bubble curtains. These create a barrier that muffles the underwater sound and deters animals from entering a site. Further, bubble walls can restrict the dispersal of suspended sediments.



Bubble tubing has fine perforations to create micro-bubbles



Bubble Tubing barrier



Bubble Tubing fine bubble linear diffuser

Outcome

- The product could be used for mitigating the environmental impacts of marine infrastructure projects, including marine renewable energy developments, thereby de-risking their licensing process.
- This project will contribute to the environmental sustainability of new coastal developments. Results could enable Frog Environmental Ltd to market a new product and expand sales of Bubble Tubing™ for applications during coastal engineering construction phases (e.g. tidal lagoon, installation of underwater turbines, jetty installation).



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