

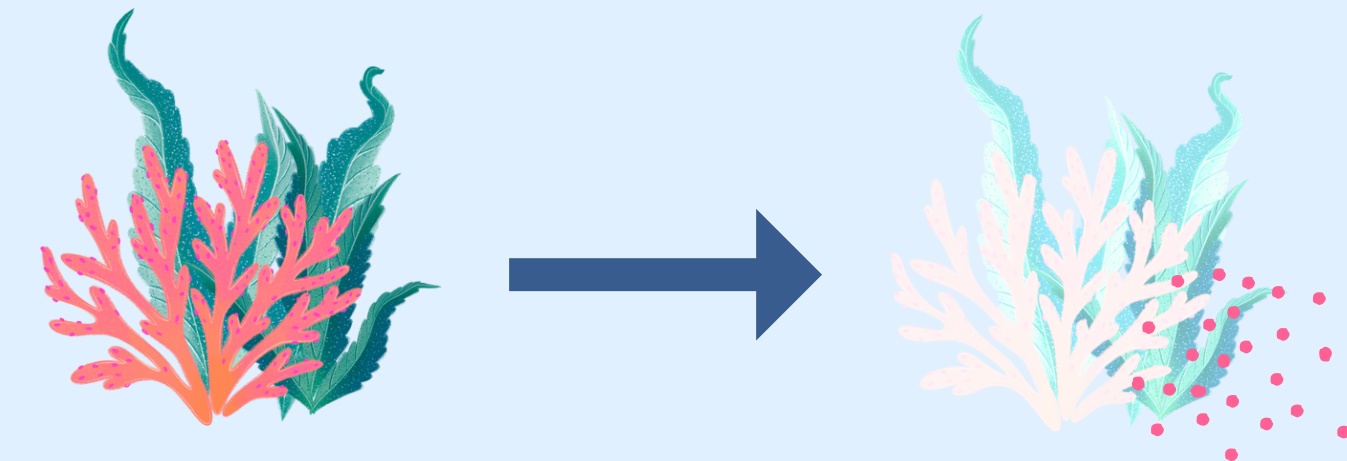
THE BUOYFRIEND

THE POTENTIAL OF BUBBLES TO PREVENT CORAL BLEACHING

THE GRAND CHALLENGE

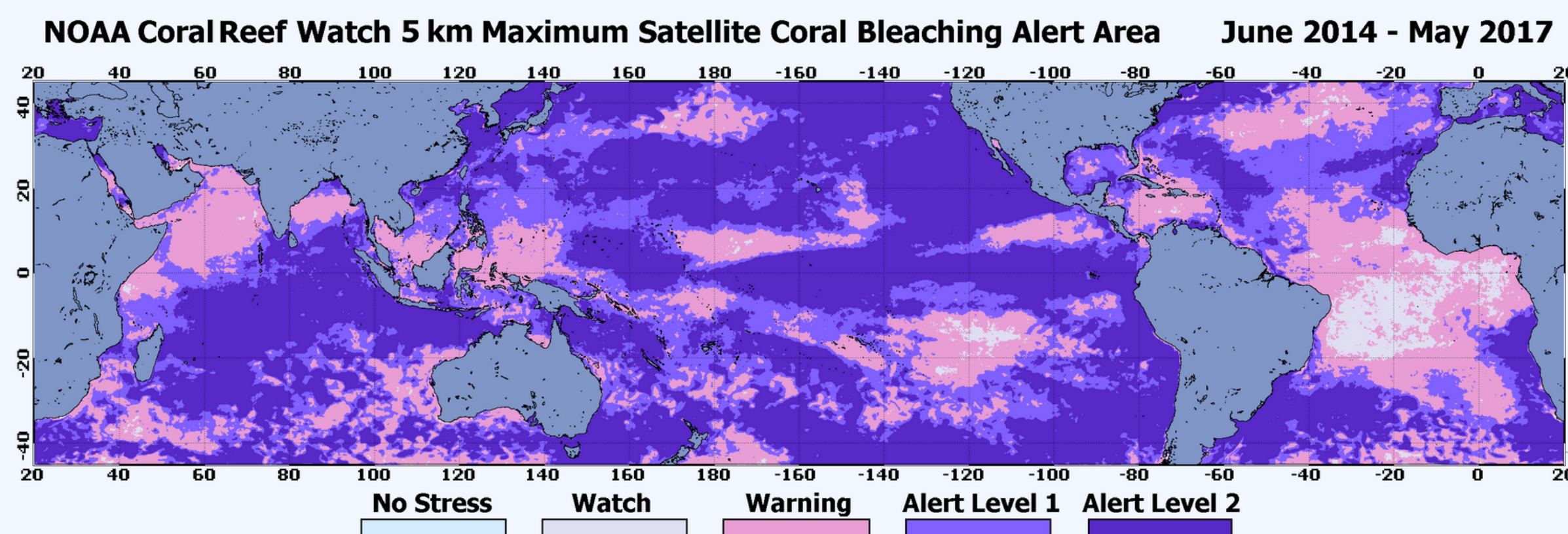
CORAL BLEACHING

- Corals receive the majority of their nutrition from symbiotic algae called zooxanthellae
- When oceans exceed their mean summertime temperature by at least **1°C**, they expel their algae and are prone to dying



How Might We: prevent catastrophic coral bleaching events and protect marine environments in the face of increased ocean temperatures?

VULNERABLE REEFS AROUND THE WORLD

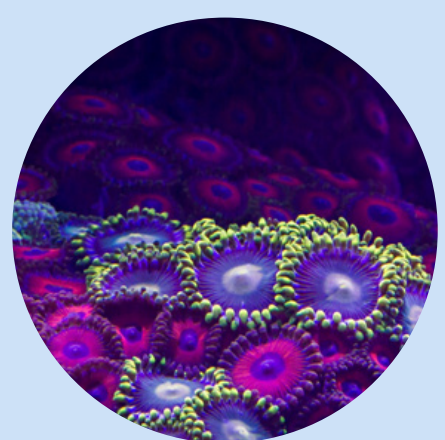


Coral tourism and fishing add **\$375 BILLION** to the global economy annually

Every year, reefs prevent **\$1.8 BILLION** worth of damage from floods in the US

Only **60-70%** of corals regrown in supervised "nurseries" survive

SOLUTIONS?



Gene Editing & Selective Breeding to Grow Heat-Resistant Coral



Increasing Cloud & Mist Cover to Reflect Solar Radiation

OUR PRODUCT

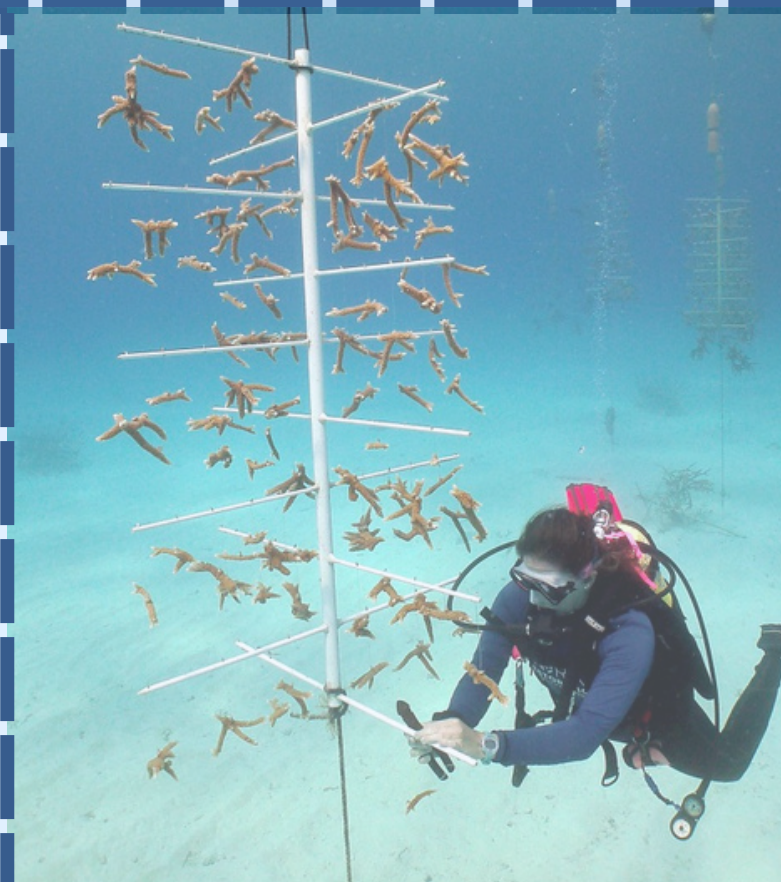


A buoy that can be tethered to coral trees/artificial structures in nurseries

An attached thermometer indicates when waters are dangerously warm



Produces microbubbles that backscatter incoming sunlight and cool the water



UNIQUE VALUE

100 W/M

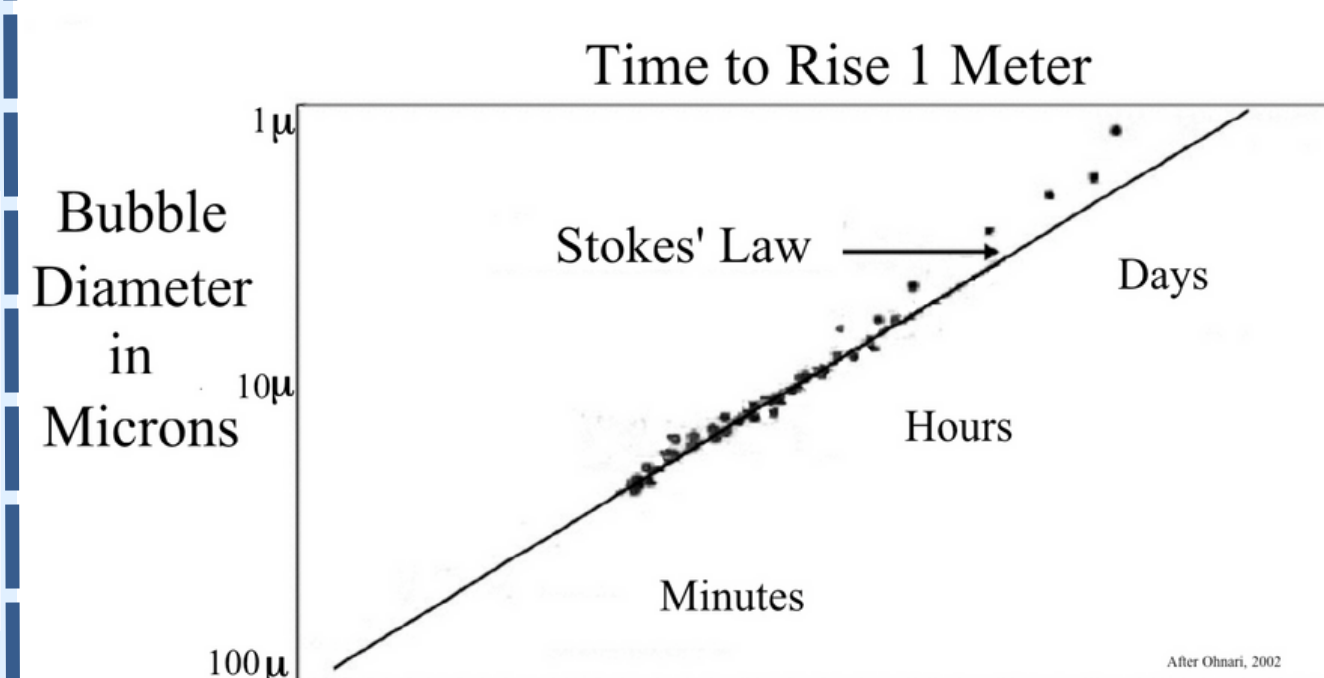
of incoming solar radiation reflected by microbubbles

\$11 BILLION

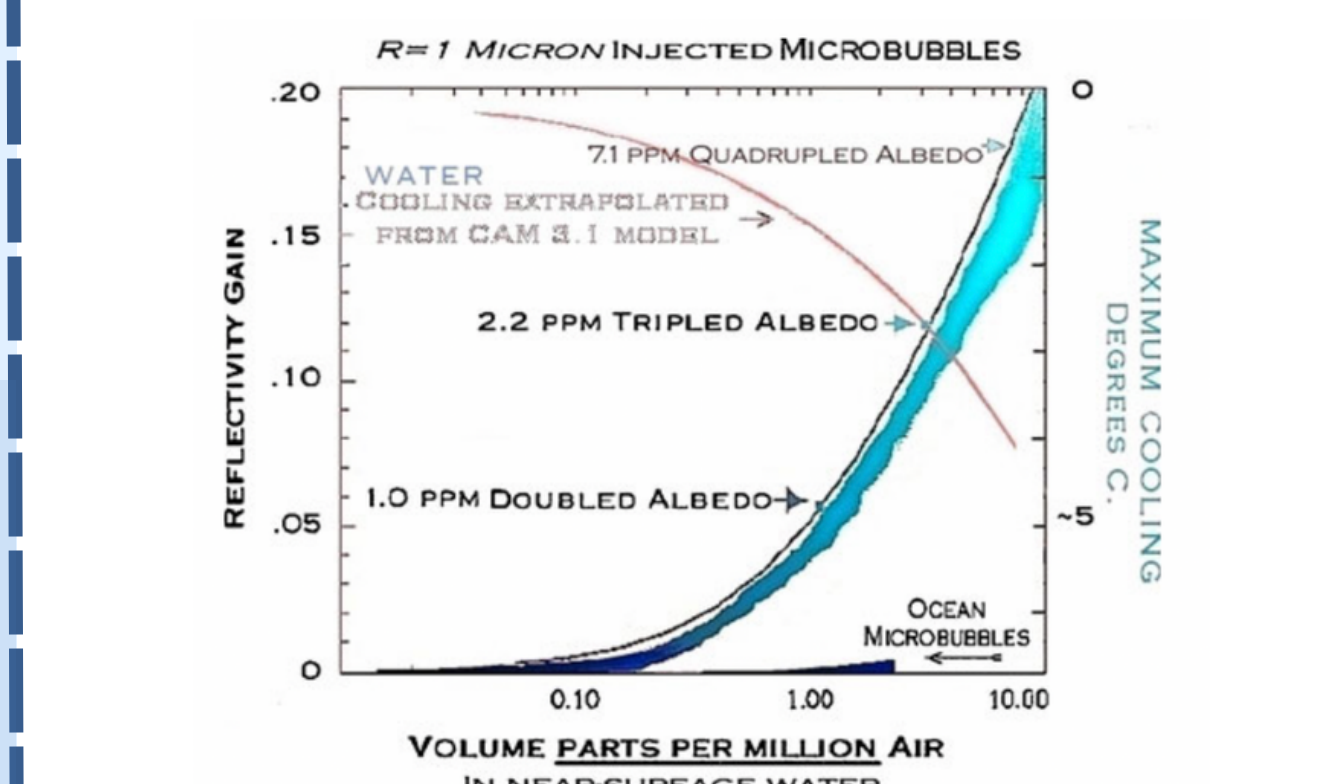
Avoids the cost and environmental concerns of SO₂/aerosol injection to block sun

Bubbles also remove some dissolved CO₂ which can decrease ocean acidity up to: **26%**

SMALLER BUBBLES LAST LONGER



↑ BUBBLES = ↑ TEMP. REDUCTION



NEXT STEPS

1. Develop a Viable Prototype



2. Test Our Device in Coral Nurseries

