

Bringing Concrete to Life

Carbon Negative Technology Innovations Fighting Climate Change

***Dr. Shimrit Perkol-Finkel
Co-founder & CEO***



Population Growth

50%

of the world's population
residing along coastlines



Concrete Problem

70%

of coastal and marine structures
are concrete based

Poor Water
Quality

Invasive
species

Low
Biodiversity

ECOconcrete

#2

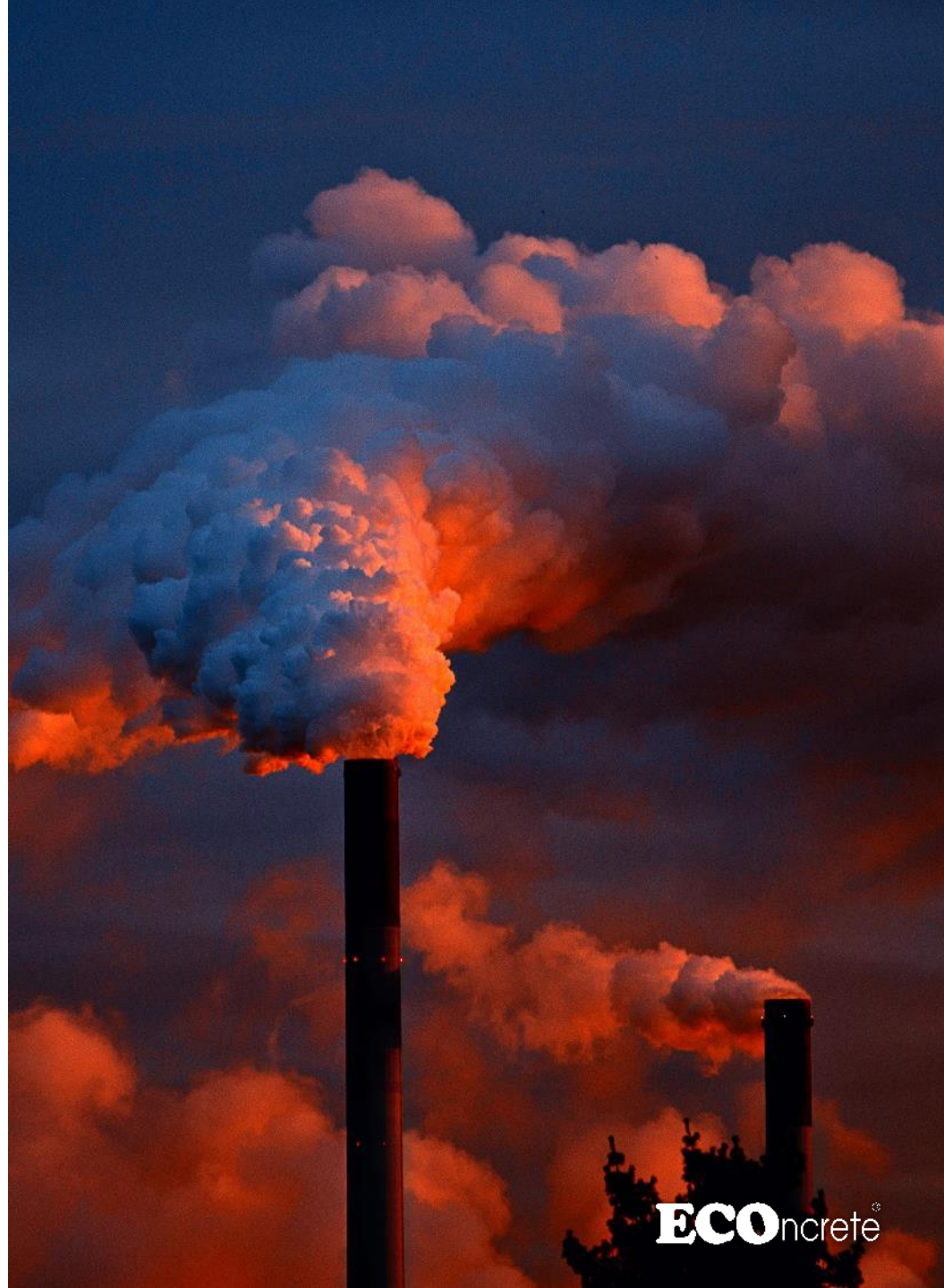
Consumed material in the world
(water is #1)



Concrete Problem

8%

of humanity's carbon emissions

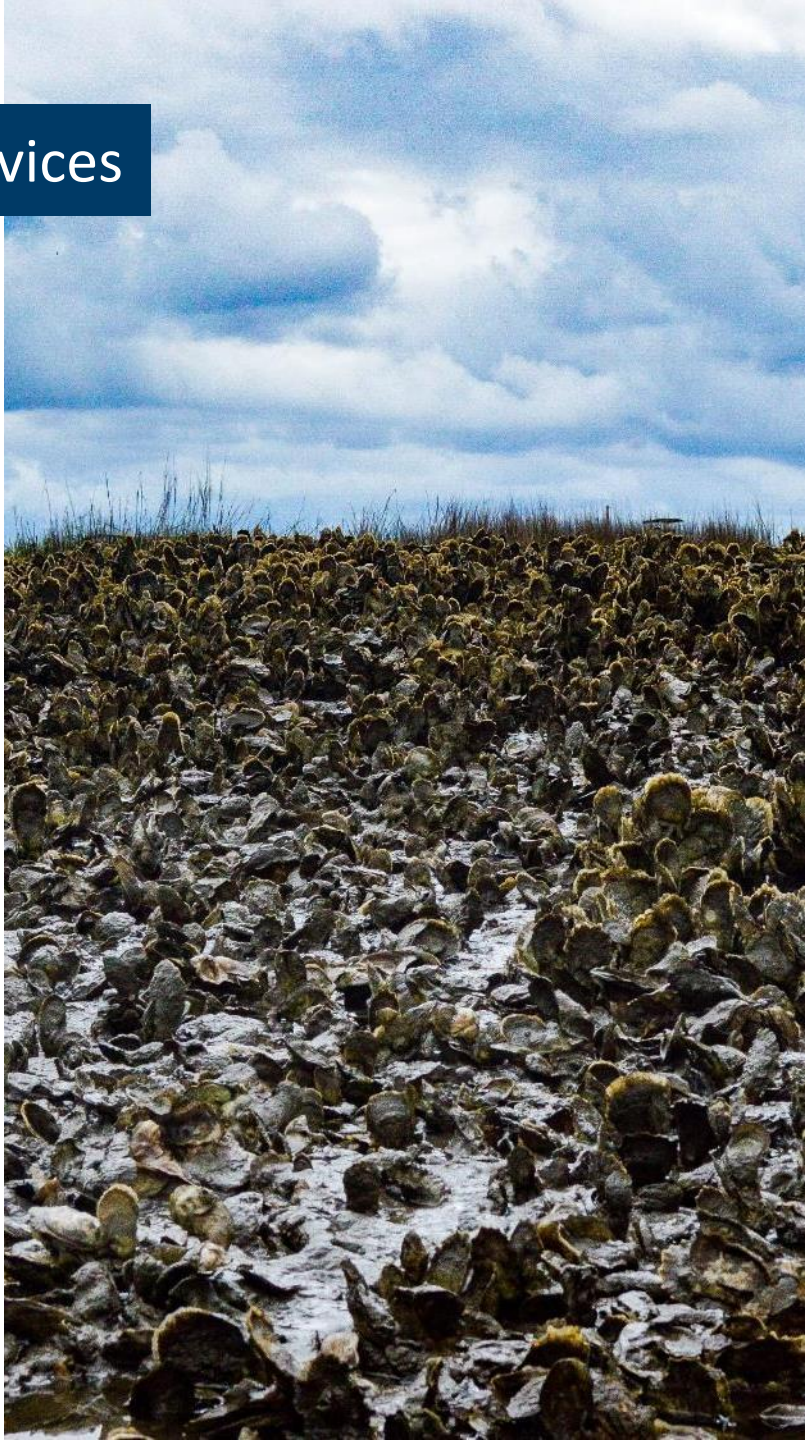


Climate Change





Loss of Habitat & Ecosystem Services



Biomimetic Solution



Material Composition

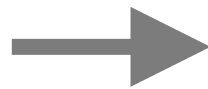


Surface Complexity



Macro Design

Material Composition



Surface Complexity



Macro Design



Bringing Concrete to Life



Bio & Eco Advantages

- Biodiversity
- Biological niches
- Ecosystem services
- Water quality
- Reduce invasive species
- Aesthetics



Bioprotection

- Strength & durability
- Reduced chloride penetration
- Absorption of wave energy
- Microclimate buffering
- Reduce maintenance



Low Carbon Admix

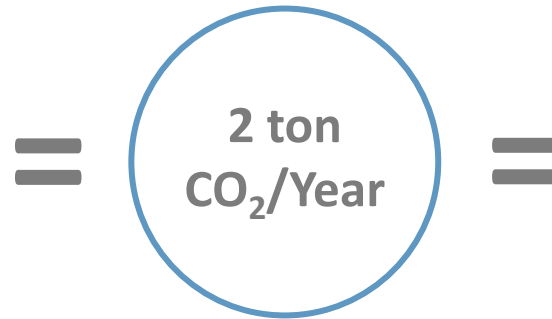
- Bio-enhancing concrete admixture >90% Recycled Materials & Byproducts
- Scientifically validated to provide an improved substrate for the settlement of marine fauna and flora
- Dosage: 10% of cementitious materials (5% admix & 5% filler)
- Complies with the UK, EU (SI 89 and the EN 934-1 2008 and EN 934-2: 2009 + A1: 2012), and Australian (Special purpose admixture, Section 3 and 4 of AS 1478.1-2000 (R2018)) standards for general and workability concrete admixtures



Biocalcification



1 Km
ECOConcrete seawall *



100 trees **

* For a 7 m tall seawall

** Average 20kg/Year CO₂ absorbed per adult tree <http://urbanforestrynetwork.org>

Photosynthesis

- Enhanced growth of marine flora
- Increased photosynthesis
- Reducing carbon footprint by harnessing natural processes



COASTALOCK™



ECO[®]crete

Tide Pool Armor



ECO Seawall



ECO Mats



ECO Piles & Jackets



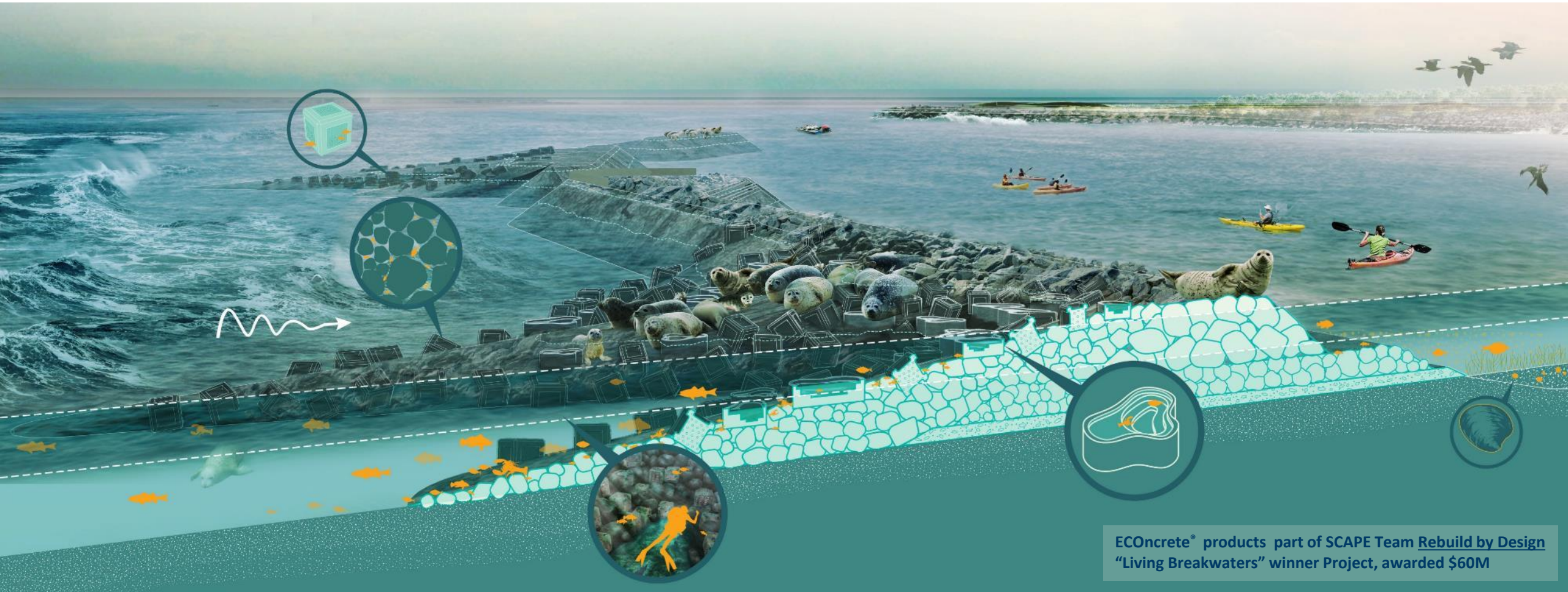
COASTALOCK™



ECO Armor Block



Reduced Mitigation



ECOcrete® products part of SCAPE Team Rebuild by Design
“Living Breakwaters” winner Project, awarded \$60M

Living Breakwaters case study:

- Breakwater regions below MHHW = Habitat Creation
- Eco-Design drastically reduced mitigation fees: **18M\$** → **4M\$**

Global Market



30

Locations

6

Seas

8

Countries

Port Haliguen, FR

Port of Hamburg, DE

Herzelia Port, IL

Port of Fontvielle, MC

Port of Rotterdam, NL

Tipner Lake, GB



Why EConcrete



Biodiversity

X2

A circular image showing a vibrant underwater coral reef with various colorful fish swimming around it.

Water Quality

X16

A circular image showing white-capped waves crashing against a rocky shore in a clear blue ocean.

Carbon Sink

X7

A circular image showing a sunlit forest path with tall trees and dappled sunlight on the ground.

Facilitated Permitting

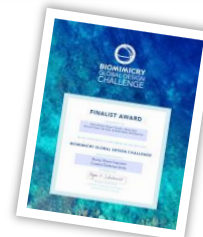
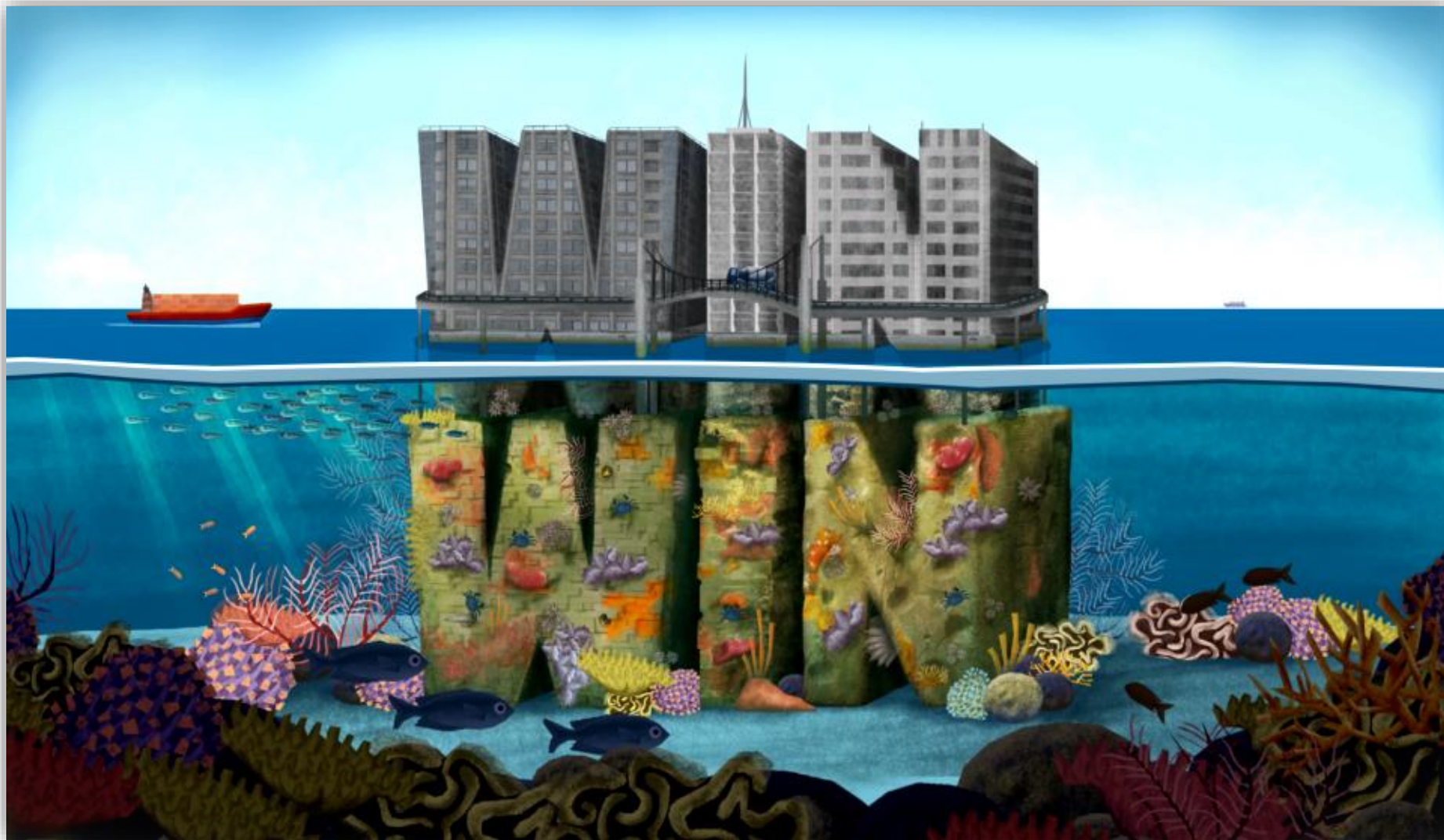
A circular image showing a close-up of a person in a suit writing on a document with a pen.

Reduced Mitigation

A circular image showing three small green plants in pots, where the pots are made of stacks of coins, symbolizing investment and growth.

Low Maintenance

A circular image showing two construction workers in orange safety gear working on a platform near a body of water.



For additional information please contact: Shimrit Perkol-Finkel: shimrit@econcretetech.com