CORALS AS COMMUNICATORS

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“It is extremely likely that human influence has been dominant cause of observed warming since the mid-20th century.”

-- IPCC, 2013
warming of +1-5°C by 2100

regional impacts still uncertain, especially for precipitation
What if we had detailed climate records that were 100’s (or 1000’s) of years long?
El Niño-Southern Oscillation (ENSO)

natural climate cycle in the tropical Pacific

affects global climate, esp. rainfall

frequency: 2-7 yrs
Is ENSO changing?
100 YEARS
500 YEARS
IS THE CORAL’S CLIMATE STORY ACCURATE?

R = -0.66

Cobb et al., Nature 2003
AFTER 15 YEARS OF WORK
TROPICAL PACIFIC CLIMATE
OVER THE LAST MILLENNIUM

20th century trend towards warmer conditions is unprecedented
Significant increase in 20\textsuperscript{th} century ENSO activity

Cobb et al., Science 2013
EPISODE 3: THE SURGE
OK, SO CLIMATE IS CHANGING. NOW WHAT?
FOUR OPTIONS

0) adapt to coming climate change

1) use less energy

2) shift to low-carbon energy

3) take CO\textsubscript{2} out of the sky

4) geo-engineer our planet’s energy balance
FOUR OPTIONS

1) use less energy
2) shift to low-carbon energy
3) take CO$_2$ out of the sky
4) geo-engineer our planet’s energy balance
THE CARBON REDUCTION CHALLENGE

6 STUDENT TEAMS
8 WEEKS
1 PRIZE

Goal: 400,000 LBS CO₂ SAVED
saving $$
saving the planet
while training the next generation
PRIZES:
trip to DC to meet w/ lawmakers on Capitol Hill

$$$

# Image Description

- A group of people poses in front of the United States Capitol building.
- Two photos of the same group are shown, with one featuring a close-up of the group.

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- The prizes include a trip to DC to meet with lawmakers on Capitol Hill.
2015 Carbon Reduction Challenge totals:

2,000,000+ lbs
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Number of partners:

40+
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2,000,000+ lbs

Number of partners:

40+
The corals have spoken.

THANK YOU FOR LISTENING

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