



**FRAMING
CLIMATE CHANGE:**

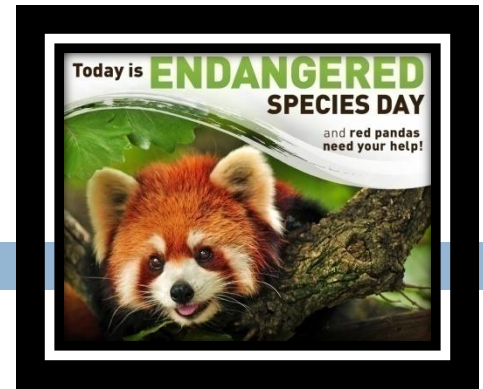
**HOW TO INSPIRE CHANGE
AND MAKE A DIFFERENCE
WITHOUT BUMMING
EVERYONE OUT**

Blair Bazdarich

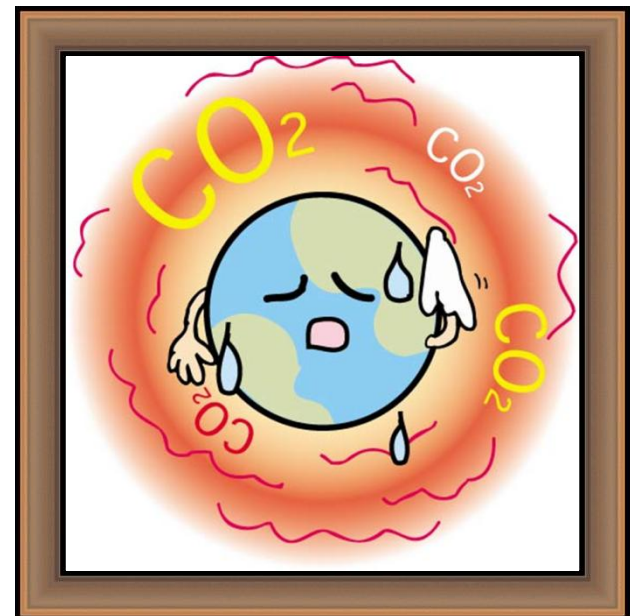
Outreach and Teen Program Manager, San Francisco Zoo



Why Use a Frame?



- ❑ Zoos and Aquariums are trusted voices
- ❑ Make cultural models work to our benefit
- ❑ Keeps our conversation productive, and prevents us from ending up in the swamp!



Why Use a Frame?

- ❑ Prevents harmful assumptions
- ❑ Gets people acting like citizens
- ❑ Makes impact
- ❑ Promotes community action!



Trusted Voices

Always Remember:

- ❑ Zoos, aquariums, and museums are a trusted, impartial voice for environmental concerns.
- ❑ Most visitors enter our gates expecting conversations regarding endangered species, consumer choices, and green alternatives.
- ❑ If they are in the Zoo, they care about animals and the environment. They are already invested.
- ❑ Our visitors want climate change information.

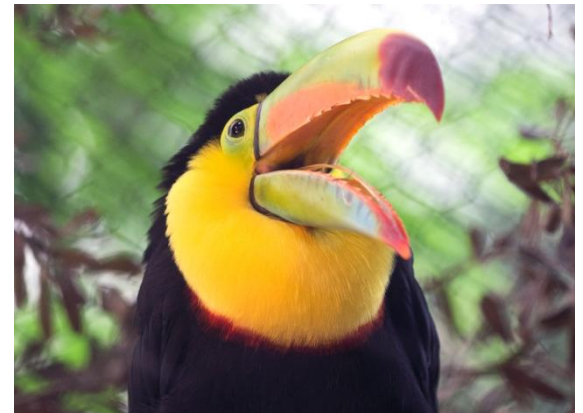


NNOCCI National Network for Ocean and Climate Change Interpretation

NNOCCI is a partnership between informal science educators, climate scientists, cognitive & social scientists and evaluators whose mission is to change the world through better communication techniques around climate change.



If we train enough voices in proven communication techniques we think we can change the national discourse around climate change to be productive, creative and solutions focused.



Our Audience: A Golden Opportunity



***Association of Zoo & Aquarium institutions reach
180 million visitors a year***

A Primed Audience

70% percent of visitors agree that the most important environmental issue confronting the world is climate change.

(NWZAA, 2009 & Ocean Project 2009)



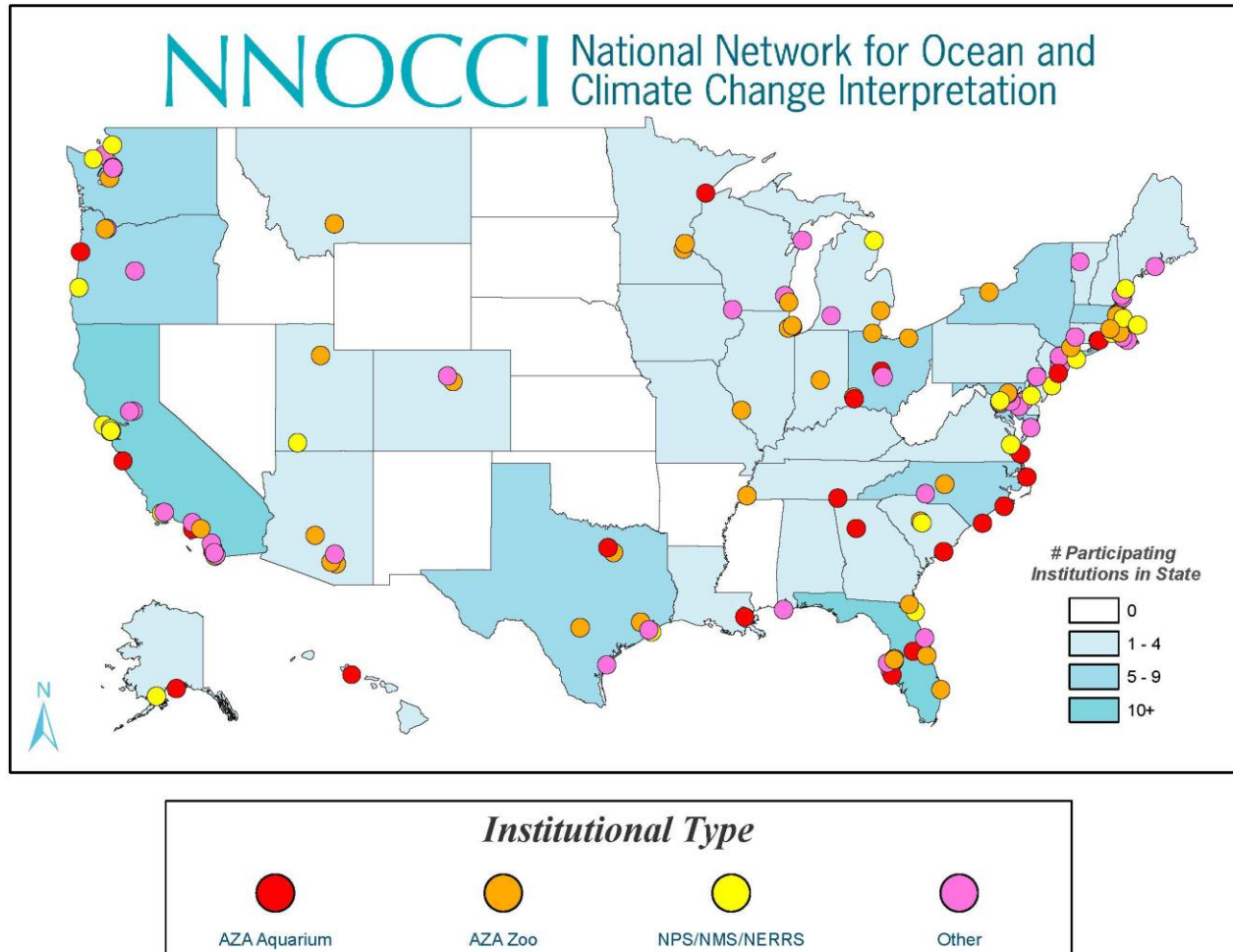
A Primed Audience

75% of visitors believe zoos & aquariums should make recommendations for how the public can protect the environment.

(CLiZEN 2012)

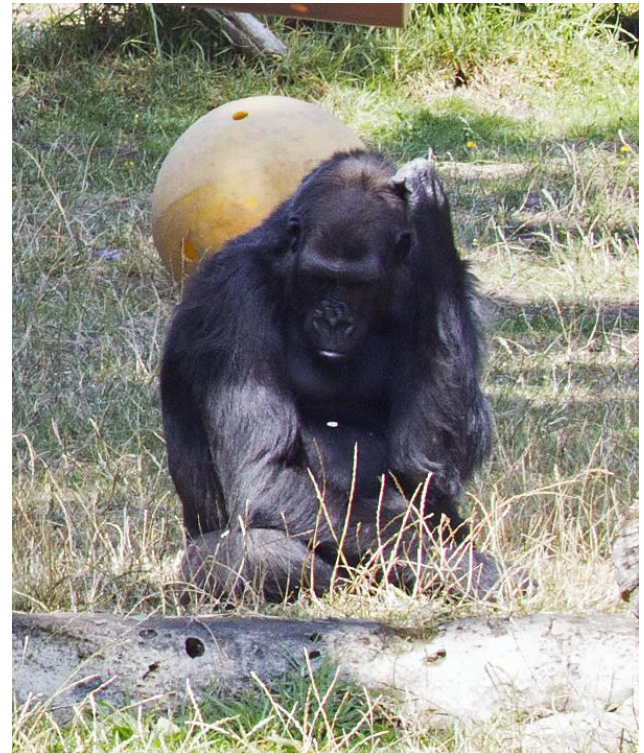


NNOCCI Reach: Current vs. Future



So...

what's actually
happening?



Global Climate Change

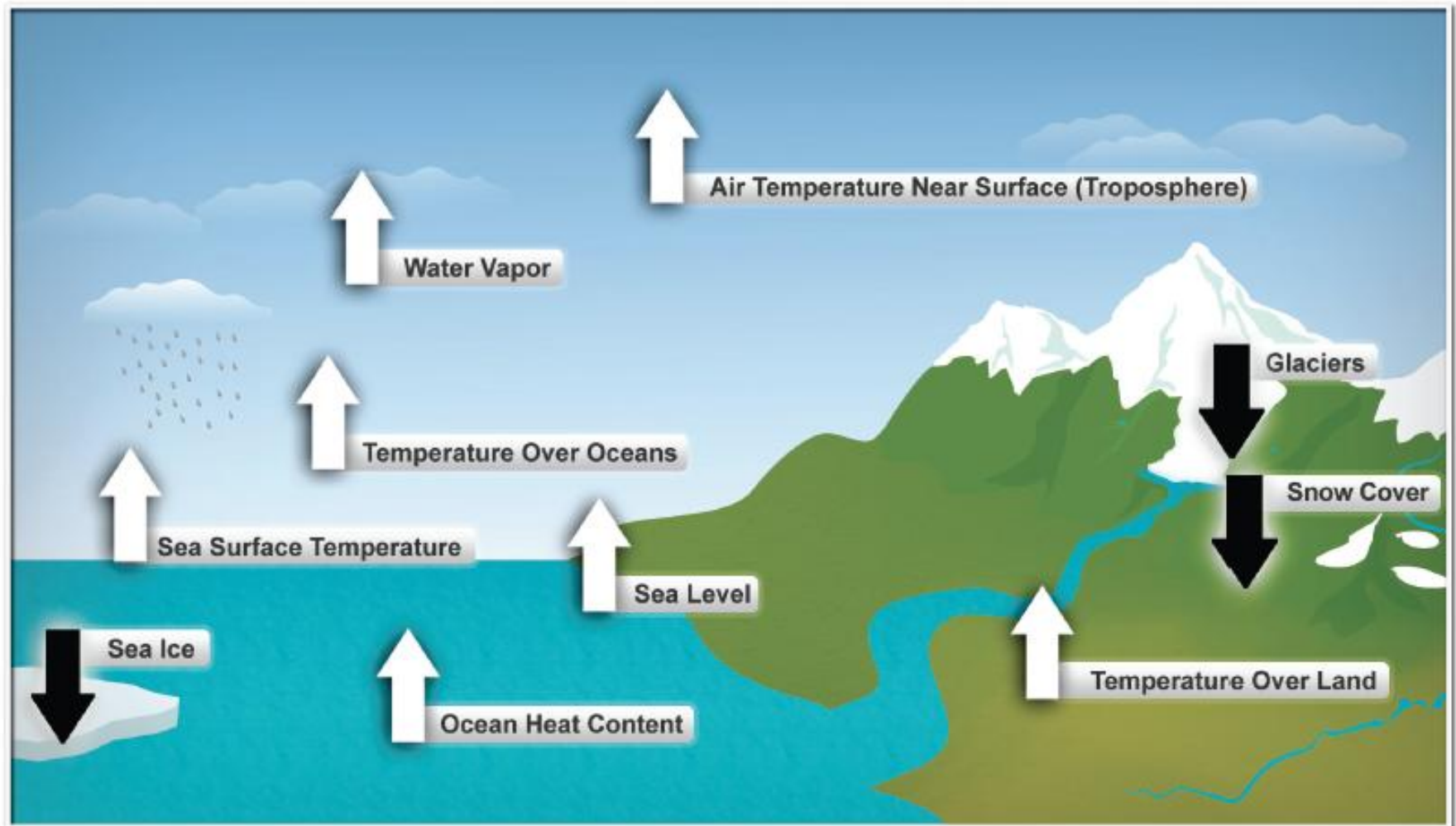


CHANGING:

- Temperature
- Precipitation
- Humidity
- Wind
- Pressure

**Average over 30 years

Ten Indicators of a Warming World:



“But we had such a cold winter?”

CLIMATE:

Climate → What clothes should I buy for the season?

Weather → What should I wear today?

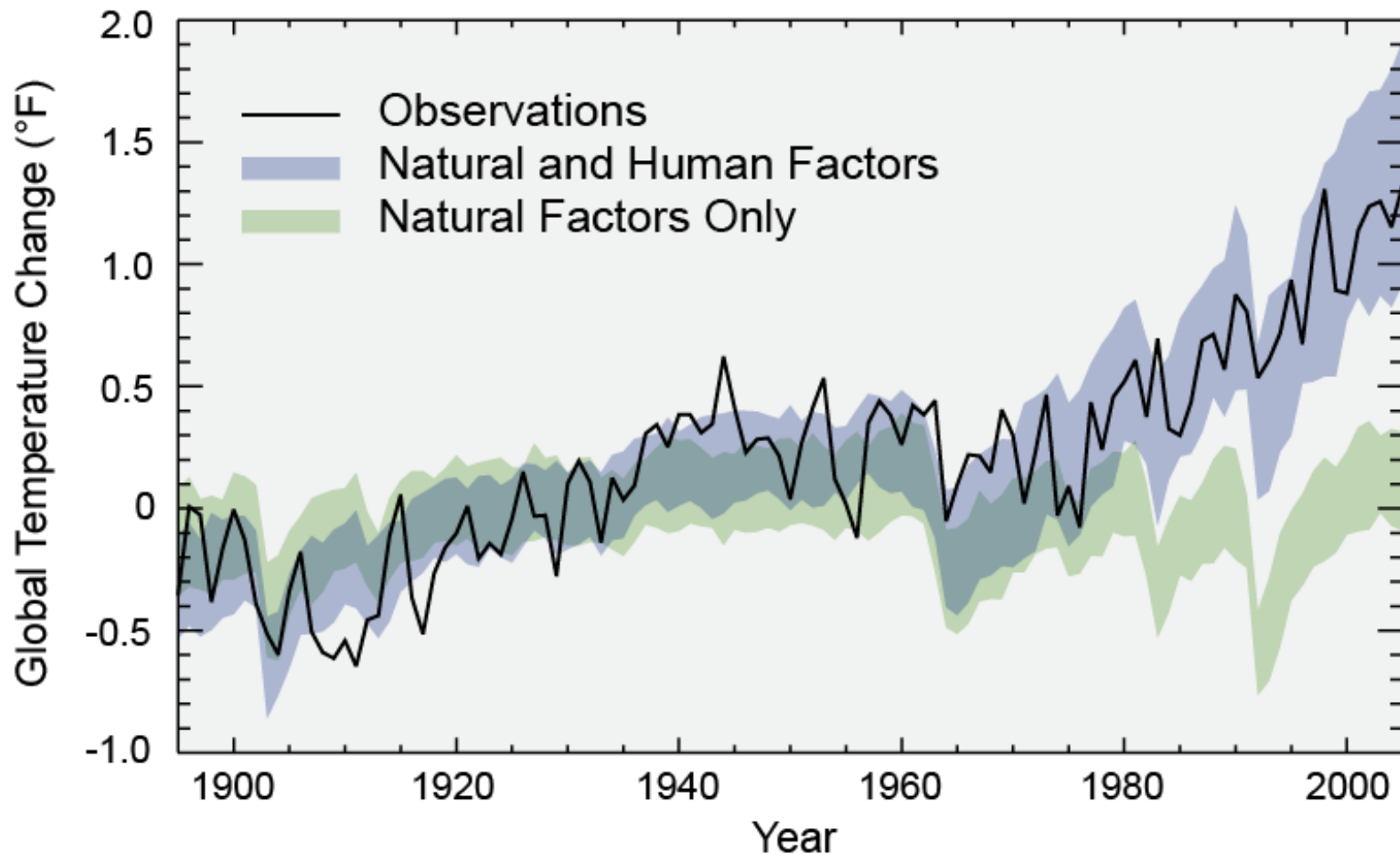


Mechanism of Climate Change



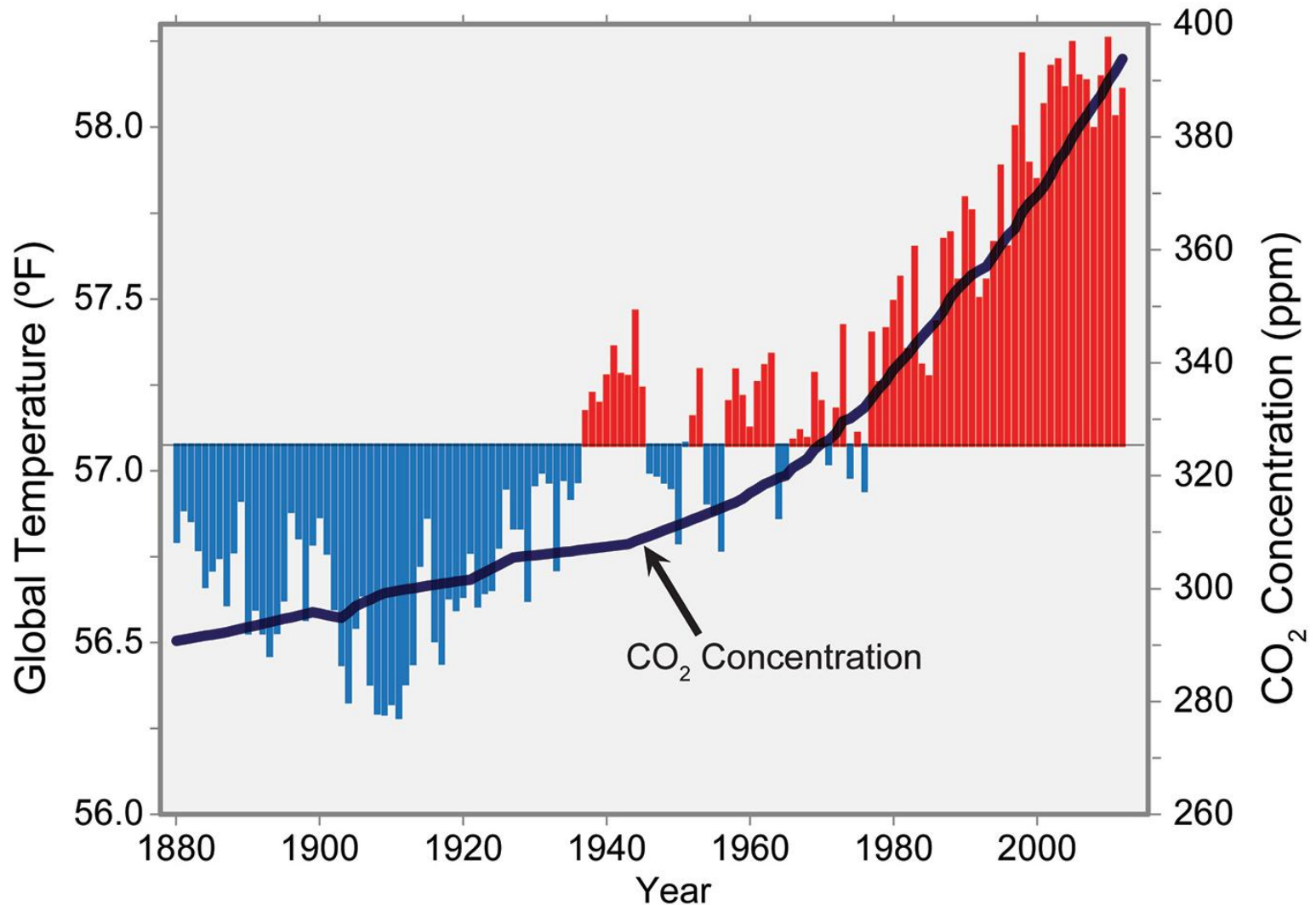
Going... going...

Separating Human and Natural Influences on Climate

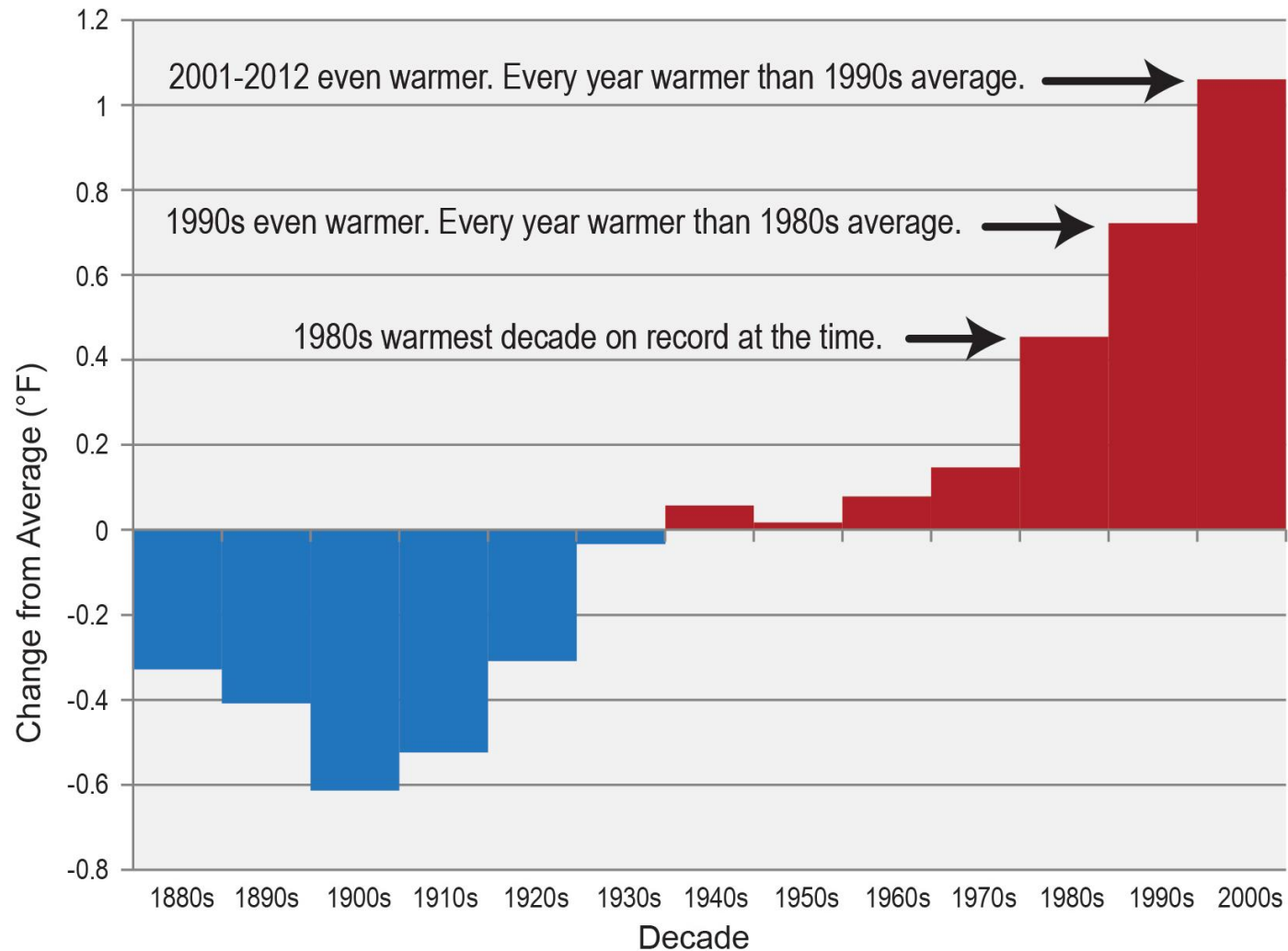


HES
ppm
9th,
3

Global Temperature and Carbon Dioxide



Temperature Change by Decade



Does all carbon dioxide go into the atmosphere?



+



Atmosphere
45%



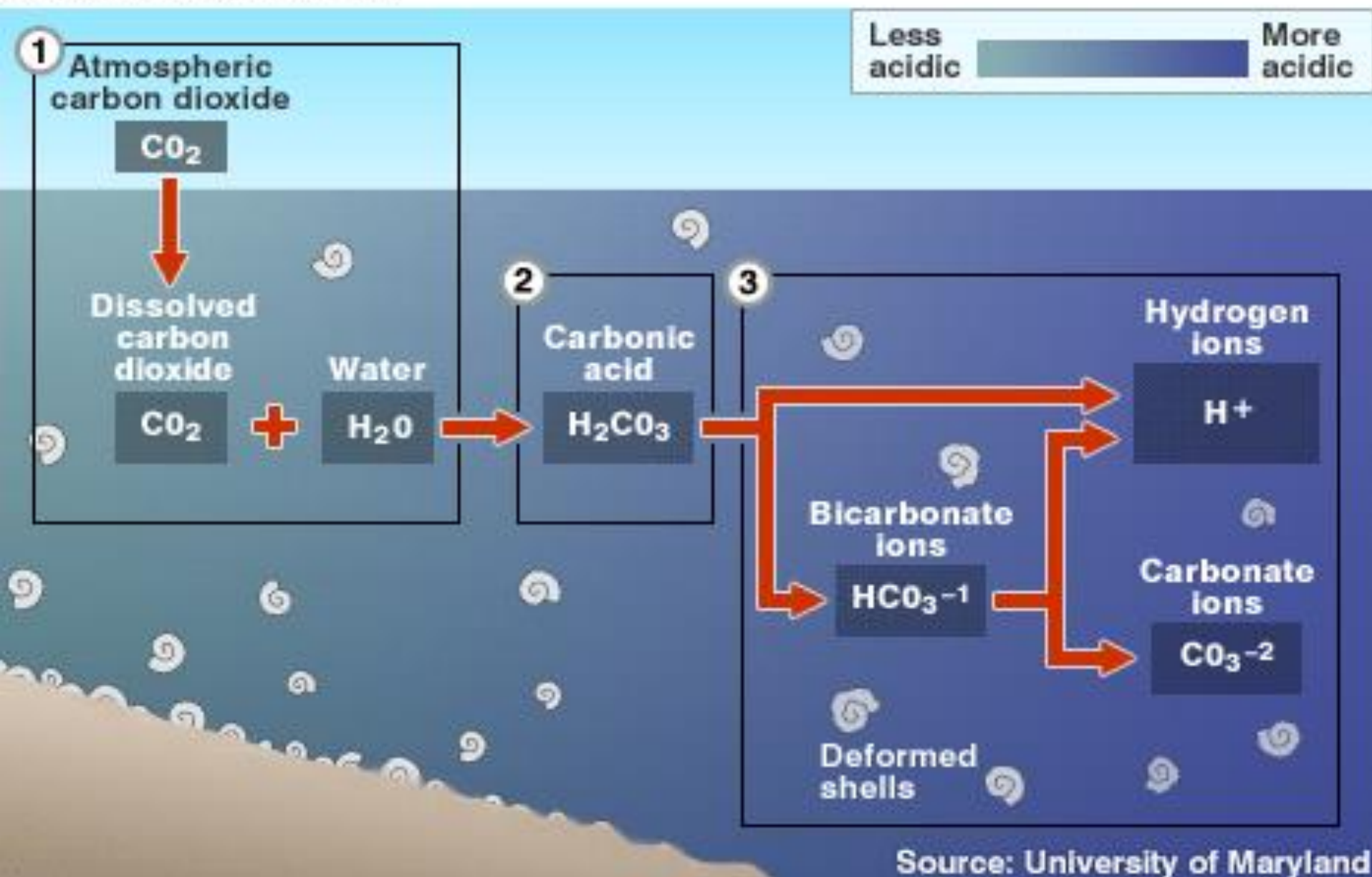
Land
29%



Oceans
26%



OCEAN ACIDIFICATION



A Few Facts to Note:



- ❑ Scientists have understood the fundamentals of the burning of fossil fuels and how CO₂ traps heat since the Civil War
- ❑ The last time the earth had 400ppm of CO₂ in the atmosphere was between 4 and 2 million years ago
 - ❑ Mastodons roamed North America
- ❑ The last time sea surface temperatures were like they are today was 125,000 years ago
 - ❑ That change took about 4 millennia
 - ❑ This current change took 150 years

Put Quite Simply...

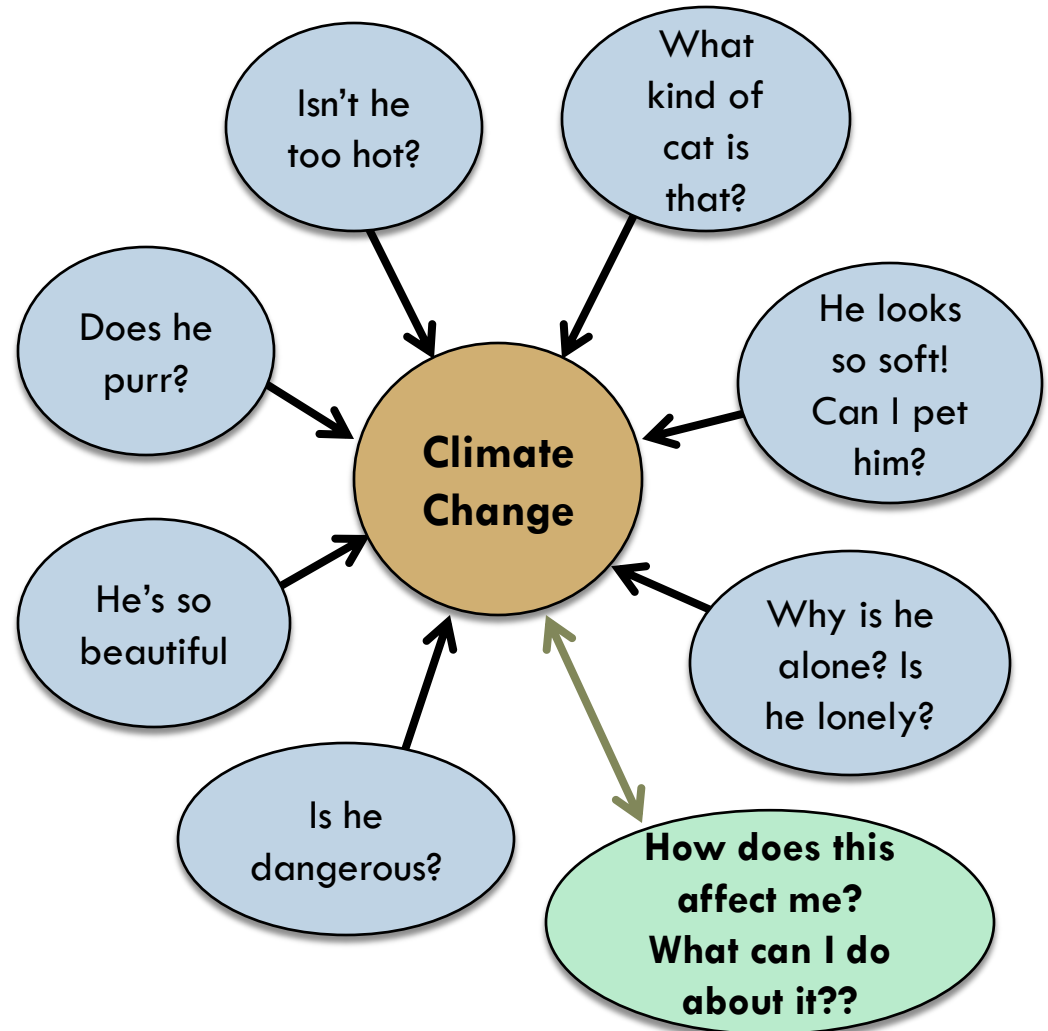
Climate Change:

- **It's Real**
- **It's Us**
 - ▣ Human caused
- **It's Bad**
 - ▣ Harmful to humans
- **Scientists Agree**
 - ▣ 97% of climate scientists agree that human-caused climate change is happening
- **There's Hope**
 - ▣ This problem is solvable!



Our Approach:

All Roads Point to Home



What is a Frame?

- Research-based
 - ▣ (NNOCCI and Frameworks)
- Multi-faceted
- Goal-oriented
- A well-built frame will follow these commandments:
 - Start with a **Value**
 - Use an **Explanatory Metaphor**
 - Tell the story with a **Causal Chain** (with context)
 - Navigate **The Swamp**
 - Employ a Conversational Tone, avoiding **Traps**
 - **Bridge and Pivot** around troublesome topics
 - Offer or suggest **Community-level solutions**



Always Start with a VALUE

- The values are the “so what?” of the conversation
 - ▣ What is the issue about? What is at stake?
- Even though we all have different things that we value, reasons to value things are mostly universal



Value

Protection

Why does it matter? What's at stake?



Value

Responsible Management

Why does it matter? What's at stake?

Protection



‘x’ matters because we have a duty to safeguard the wellbeing of people and places from being harmed by the issues facing our environment.

- We must protect and preserve the habitats and ecosystems we depend on
- Showing concern for others is the right thing to do
- Stepping in to ensure peoples’ safety and well being
- Sense of Agency: Let’s take measures to actively eliminate or reduce risks
- Sense of Urgency: Let’s be vigilant in shielding and safeguarding habitats and people from harm



“We believe in protecting and preserving the world’s unique habitats, like the estuary you see here. By taking action now to ensure that this habitat will be here for the animals that live in it, we are also protecting future generations from the increased storms and floods we can expect to experience due to the changing climate...”

Responsible Management



‘x’ matters because taking practical, common sense steps to address problems facing our environment today is in the best interests of future generations

- We believe in being responsible with our natural resources/when it comes to our environment
- We can make a difference by handling problems before they get worse
- Looking to evidence, keeping an open mind, and focusing on the best ways to solve a problem are part of being responsible.
- Future generations depend on the decisions we make today
- Practical, feasible, step-by-step approaches allow us to make real progress on longstanding challenges and obstacles



It's important that we all take responsible steps to manage the issues facing our environment, to leave our planet in good shape for future generations of otters and people! Did you know that by reducing our fossil fuel use now, we can actually slow down or even prevent the flooding and erosion that are damaging the otters' river habitats?

Can You Find the Value?



Together, we can stop the cycle of illegal trade. Through strict law enforcement, economic strategies, and conservation messaging, the Zoo and its partners are working to change the tide of wildlife trafficking and protect wild plants and animals.

US Fish and Wildlife Service: The USFWS has developed the most advanced and robust wildlife law enforcement program in the world. Inspectors are posted at ports across the country, agents provide training around the world, and a one of a kind forensic lab aids in combating wildlife crime internationally.



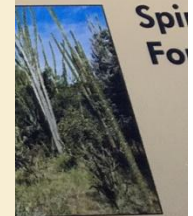
Conservation Strategy Fund: (CSF) provides training for conservation professionals in basic economics and analyzes projects affecting ecosystems, specifically in biodiverse tropical forests. Since 1998, CSF has trained over 2000 people from 90 countries, helping to articulate the economic rationale for habitat protection and preservation.

WildAid: "When the buying stops, the killing can too." WildAid's mission is to end illegal wildlife trade by reducing demand by conducting culturally sensitive public awareness campaigns and comprehensive marine protection.

How you can stop illegal wildlife trade

Make smart souvenir purchases when you travel.

Support conservation organizations working to help wildlife.



Spin
Fo

of habitat found in
s characterized by
es, similar to cacti
only found on the
species found in th
only found in Ma
y cattle grazing a

Explanatory Metaphor

- ❑ Accurately reflects expert knowledge
- ❑ Can be learned through brief exposure
- ❑ Can be retold easily after it is learned
- ❑ Can be remembered over time
- ❑ Motivate productive consideration of multiple solutions



Explanatory Metaphor

Heat-Trapping Blanket

A metaphor for the basic mechanism of climate change

Heat Trapping Blanket



The story you're telling:

When we burn fossil fuels for energy, we add more and more carbon dioxide into the atmosphere. This buildup acts like a blanket that traps heat around the world, which disrupts the climate.



Strategically redirects thinking away from patterns such as:

- Change Is Natural/Fatalism
- It's About the Ozone, Isn't It?
- Nature Will Fix Itself
- Nature Works In Cycles
- Solution = Recycling

Heat Trapping Blanket



- The atmosphere is like a blanket that surrounds the earth.
- When we burn fossil fuels like coal, oil, and natural gas for energy, we add carbon dioxide to this blanket, which is like thickening the blanket.
- The thicker a blanket gets, the more heat it traps underneath.
- The “blanket effect” leads to warming, which disrupts the climate.
- Extra heat results in...
- Reducing our emissions of heat-trapping gases is the solution.

For example...

Quite simply, when we burn fossil fuels like coal and gas, we pump more and more carbon dioxide into the atmosphere, and this build-up creates a blanket effect, trapping in heat around the world. If nothing is done to halt this process, the planet we leave our children will be hotter, with more violent weather, fewer species, and disrupted systems.



Other Metaphors...



Explanatory Metaphor

Climate's Heart

A metaphor for the role of the ocean in the climate system



The story you're telling:

Just as a heart circulates blood and regulates the body's temperature, the ocean controls the circulation of heat and moisture throughout the climate system.



Explanatory Metaphor

Osteoporosis of the Sea

A metaphor for some of the effects of ocean acidification



The story you're telling:

Ocean acidification is a change in the chemistry of the ocean and causes "osteoporosis of the sea," which prevents animals at the bottom of the food web from building and maintaining the protective shells they need to survive.

Explanatory Metaphor

- ❑ Accurately reflects expert knowledge
- ❑ Can be learned through brief exposure
- ❑ Can be retold easily after it is learned
- ❑ Can be remembered over time
- ❑ Motivate productive consideration of multiple solutions



Explanatory Metaphor

Regular and Rampant CO₂

A metaphor for anthropogenic carbon dioxide

Regular vs. Rampant CO₂



The story you're telling:

"Regular" carbon dioxide is used and created by normal life processes, but "Rampant" levels of carbon dioxide come from burning fossil fuels for energy. We need to reduce rampant CO₂. It's getting out of control.



Strategically redirects thinking away from patterns such as:

- CO₂ Is Natural Therefore It Is Good • Carbon Dioxide = Carbon Monoxide
- Ocean Problems = Material Pollution • Nature Will Fix Itself • Solution = Recycling
- Change Is Natural/Fatalism • It's the Ozone, Right?

Regular vs. Rampant CO2



- Plants grow by using the regular CO2 that animals exhale, and so some of the carbon dioxide is part of life's normal processes.
- BUT we are also adding CO2 to the air when we burn coal, oil, or natural gas for energy.
- We call this "Rampant CO2" because there's too much of it and it is getting out of control.
- Rampant CO2 builds up in the atmosphere and the ocean where it causes problems for the earth's climate and ecosystems.
- When rampant CO2 builds up in the atmosphere/ocean, it creates a heat-trapping blanket/changes the chemistry of the ocean.
- Now that we know about rampant CO2, we need to rethink and reduce our use of fossil fuels.

For example...

Plants grow by taking in the carbon dioxide that humans and other animals breathe out. But, when we burn fossil fuels such as coal, oil, or natural gas for energy, extra CO₂ is gets added to the air. We call this “rampant” CO₂ because there’s too much of it and it’s getting out of control. When rampant CO₂ builds up in the ocean, it changes the ocean’s chemistry. Now that we know about rampant CO₂, we need to rethink our use of fossil fuels.



A Brief Note on Causal Chains

- Fills the thinking
- Remove defined
- Identify audience

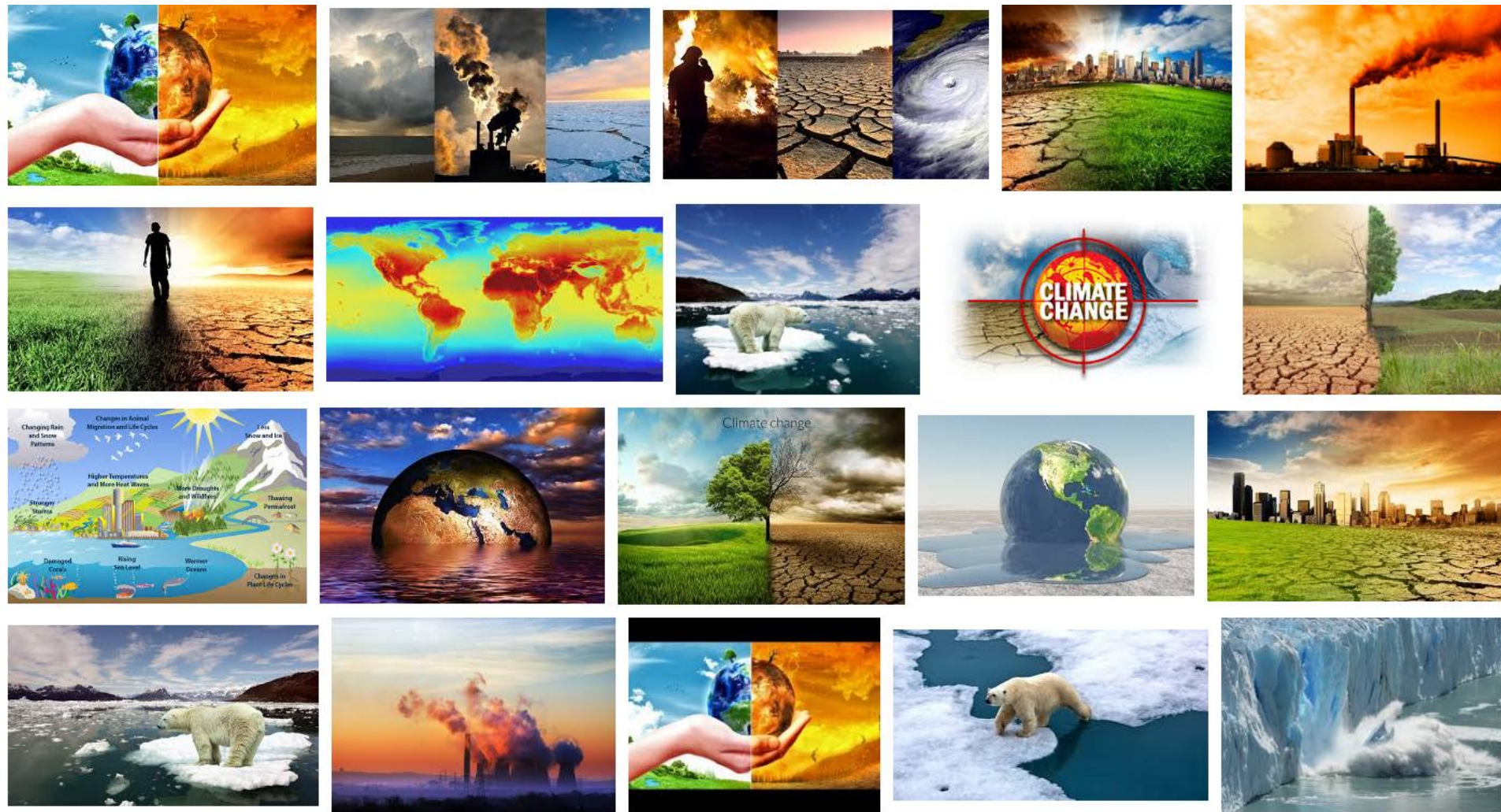


and public

not

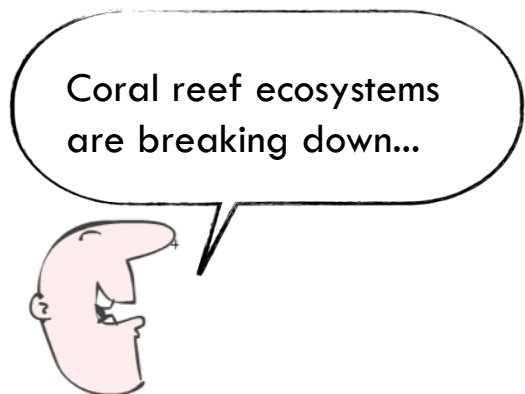
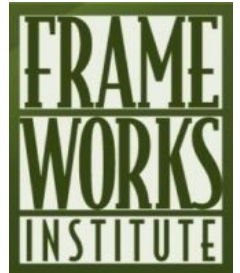
our
their own

Cultural Models



Cultural Models

- Frameworks did intensive research that informed the information and techniques employed in NNOCCI
 - ▣ One-on-one interviews up to 3 hours long
 - ▣ Open-ended questions with follow-ups to see patterns
 - ▣ Wide range of participants and large sample size
 - ▣ Recurring ways of thinking across interviews are identified, revealing shared cultural models
- Each cultural model comes with positive and negative cues.



Coral reef ecosystems
are breaking down...



Nature has ways of taking care of
herself. I'm sure the corals will be fine.

That must affect animals throughout
the food chain – including me!

Oceans

- Ocean and land= separate worlds
- Oceans are vast; Drop in the bucket
- Heal themselves
- All on the surface
- Ocean acidification- what's that?
- Ocean is too big to be harmed
- Oceans as a resource
- Basis of life
- Oceans support humans

Science

- How do scientists know that?
- New study every week
- My observation is as good as yours
- "Scientists say..."
- Science is innovation
- Eat it while you can!
- Bottomless grocery store
- Jobs vs. environment
- Cost/benefit thinking
- Ecosystems are valuable resources

Consumerism

Pollution

- Ocean problems=material pollution
- The root of all environment problems
- Just clean it up
- Solution=Recycling
- Carbon dioxide=carbon monoxide
- Human caused

What's in the swamp of...



Ocean & Climate Change



Climate Change



Public Affairs

Nature

- Nature works in cycles
- Nature is self-correcting
- Change is natural/Fatalism
- Mother nature
- System? What system?
- CO₂ is natural, therefore it is good
- Web of life/It's all connected
- Shared fate

- Climate=yearly weather patterns in place
- "It's about the ozone, isn't it?"
- Big, Scary depressing
- Climate change = warming
- Melting Ice
- What can I really do?
- Something needs to be done

- Two sides to every story
- Even if we do our part, other countries won't
- Politics as usual
- Individualism
- Government is good at protection
- Americans are problem solvers
- Civic Responsibility

What Cultural Model is at Work?



What Cultural Model is at Work?

Because the ocean is warming, we're losing some key fisheries. Some species can't reproduce properly.




Plenty of fish in the sea.




Consumerism

Ecosystems are valuable resources
Cost-benefit thinking
Zero-sum: jobs vs. environment
Bottomless grocery store
Eat it while you can!

What Cultural Model is at Work?



The impacts of climate change are going to be pretty serious.



We've got to figure out how to get a handle on this whole global warming thing.

Climate Change

Something needs to be done

It's weather

What can I really do?

Big, scary, depressing

My observation is as good as yours

Political football

It's about the ozone isn't it?

AVOID



‘Nature is self-correcting’

ADVANCE



‘Shared Fate’

AVOID



‘Individualism’

ADVANCE



‘Civic Responsibility’

AVOID



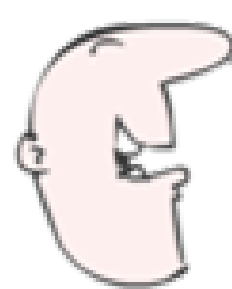
‘Oceans are vast’

ADVANCE




‘Oceans support humans’

What Cultural Model is at Work?



Coral reefs are breaking down because of ocean acidification.



That's such a shame! I wonder if there's something we can do?

Nature

We need to take care of it
Shared fate; one big web of life
Works in cycles
Mother Earth
Change is natural; you shouldn't/couldn't stop it

A Word on Tone: Traps??



- Keeping your tone conversational is key – otherwise there are some traps you may find yourself stuck in, such as...

A Word on Tone: Traps??

CRISIS

Cute Critters





Living with Humans

Due to its elusive behavior and dense forest habitat, little is known about this species. Spectacled owls are thought to be fairly common where their habitat remains. But as the rainforest continue to disappear, the spectacled owl will be at greater risk of endangerment. Although spectacled owls seem to be somewhat tolerant of deforestation, and can be found in drier woods and cultivated areas, they do need wooded areas for successful nesting.

...und the world are in critical danger from
of climate change—and so are many of
e animals who live there. Climate change is
creasing carbon emissions, which are
ed to the amount of energy we use every
e Aquarium of the Bay and act now to help
we love. Explore the energy savings tips
start today and make a positive impact.



MIND THE TRAP

Crisis/Urgency vs. Hope



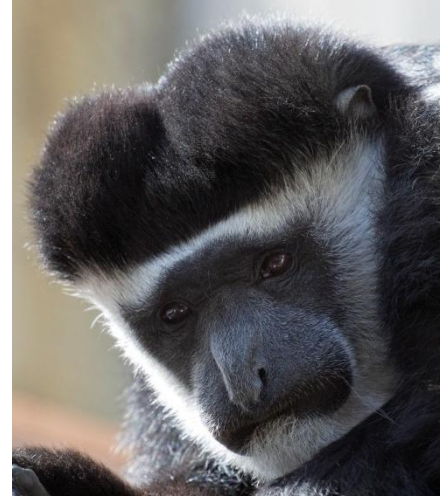
Reprinted on TV

A NEW HOPE

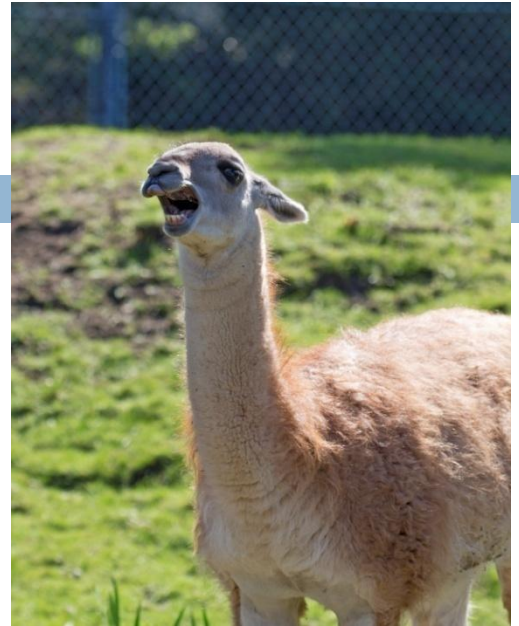
It is a period of civil war. Rebel spaceships, striking from a hidden base, have won their first victory against the evil Galactic Empire.

Crisis/Urgency vs. Hope

- Fear leads to...
 - ▣ Wariness
 - ▣ Unproductive attention to details
 - ▣ A greater perception of risks
 - ▣ Reduction in creativity
- Hope is the antidote to fear and despair
 - ▣ Excitement/happiness regarding prospects
 - ▣ Yearning feeling with the uncertainty of the future
 - ▣ Call to action
 - ▣ Coping resource
 - ▣ Promotes self-regulation



Hope Helps Everything



- Gives us a **way** and a **will** to fix what's wrong
 - ▣ Makes problems seems solvable
 - ▣ Inspires action
- Helps the cause
 - ▣ Directly: messaging and calls to action with real behavior change in your audience
 - ▣ Indirectly: inspires hope in the organization staff-wide, creates an environment that naturally breeds hope and change

Let me
emphasize
again...

Bridge and Pivot

That reminds
me...

Here's the
real issue...

□ Public relations technique:

- ▣ Recognition of a question without giving weight or power to the idea.
- ▣ Answer the question *you wish* had been asked!

It's important that we
keep in mind what the
research is telling us...

1. Analyze

- Identify the cultural model at work (use the swamp)

2. Bridge

- Use a redirecting phrase to introduce your framed message (don't restate swampy thinking)

3. Pivot

- Use a frame element that matches the cultural model at play (use a value that will resonate)

Another way to
look at this is...

The key
here is...

Let me
answer you
by saying...

That reminds me of a
question I often consider...

Another thing to
remember is...

It's interesting
you ask that.
Science is
telling us...

What's
important to
remember...

A question I
get asked a
lot is...

Let me put
that in
perspective...

The question
you raise is
really
about...

What's most
important to
understand...

But... What About the Kids?

- This same methodology can be used for children of all ages, especially in school groups



Science Education Standards

- The NGSS specifically requires climate science and resource management be included in curriculum
 - ▣ 3rd, 4th, 5th, MD, HS all specifically mention climate change
 - ▣ Weather, the carbon cycle, resources, sustainability all appear in the other grades within the standards

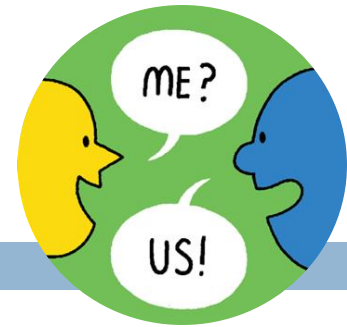


Young Students Want to Know



- What's happening to their planet
- Why is it happening
- What can be done
 - ▣ What they can be doing
 - ▣ What their parents can be doing
- But, adjustments should be made for teaching young minds
 - ▣ Language should be appropriate
 - ▣ No soapboxing!
 - ▣ Encourage conversation, answer questions
 - ▣ Stay far away from death, doom, and gloom
 - ▣ Projections are dangerous (this is true for all audiences)
 - ▣ **Solutions should be achievable**

Community-level Solutions



- Emphasize collective efforts – this is the best actual way to make change.
- Solutions are most likely to be considered if your audience comes up with them themselves!
 - ▣ Can you steer their brain to come up with the solutions you want? Remember the swamp!

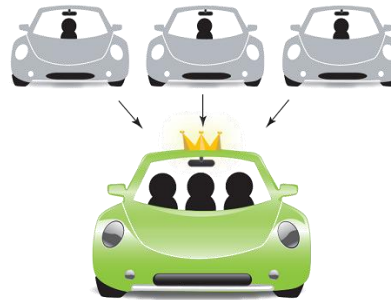


Solutions should...

- ❑ Match the scope and scale of the problem
- ❑ Play off the values used in your message
- ❑ Identify regional actions that can be taken
- ❑ Mind the swamp
- ❑ Be achievable and related to social norms
 - ❑ Don't be a salmon swimming upstream!
- ❑ Be introduced early and often

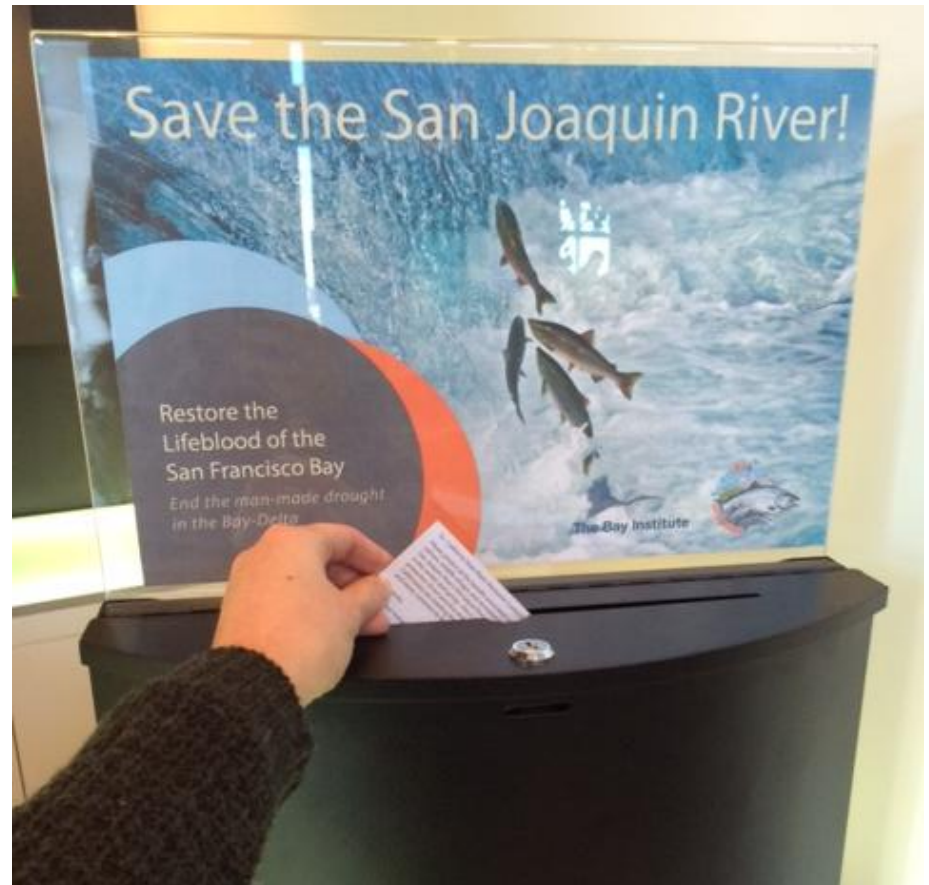


More examples...



Hot Triggers

- Solutions that people can act on immediately have the best success
 - ▣ Bonus if ongoing!



Solutions to Avoid



Single Action Bias

- *“Check that off my list!”*



Scaffolding Solutions

- *“I’m not the problem, I’m already doing my part!”*
- *Promotes consumerist thinking*

Framing Elements: Let's Review

- A well-built frame will follow these commandments:
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Identify Framing Elements

Bushmeat hunting in Madagascar

Feeding their families is a day-to-day struggle for rural villagers who live in, and adjacent to, the wildlife rich forests of Madagascar. Villagers depend on their poultry flocks as an important food source, but these flocks frequently die-off because of preventable infectious diseases and poor husbandry. When the flocks are decimated, the villagers are left with no choice but to hunt forest wildlife (bushmeat), including lemurs, to feed their families.

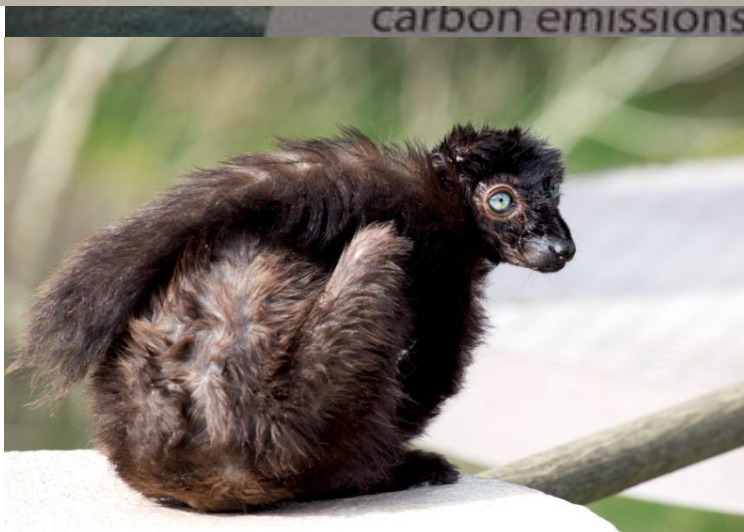


Photo credits from top to bottom: Makira Village, Chris Golden; Village Boy with chicken, Graham Crawford; Villagers, Chris Golden.

HELP US HELP VILLAGERS KEEP THEIR POULTRY FLOCKS HEALTHY

Your gift will help support village poultry health training workshops and preventative veterinary health measures by providing information on basic poultry nutrition and husbandry practices, parasite control and vaccination against common diseases. This will help to produce sustainable poultry flocks, improve human nutrition and decrease the need for locals to hunt lemurs and other forest wildlife in the Makira Protected Area, one of the largest remaining rainforests in Madagascar. A gift of five dollars will provide vaccinations for over 400 chickens.

DONATE HERE

The money you donate here will help support our conservation projects in Madagascar.

Framing Elements: Let's Review

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The Core Story of Oceans and Climate Change:

Why does this matter to society?

Protection

Responsible Management

How does it work?

Heat Trapping Blanket

How do we improve the situation?

Solutions

Or, put even more simply



WHAT: Question/Context



SO WHAT: Hook and Need



NOW WHAT: Call to Action

A Message Template for Climate Change and Marine Mammals

Level One

Value Statement

**Protection
or
Responsible Management**

Level Two (Metaphor)

What

Heat Trapping Blanket

Level Three (Explanatory Chain)

So What

**Warm water expands, and along with ice melt,
we are seeing sea level rise**

**This is reducing the size of breeding beaches
for seal lions and making the pups more
susceptible to big storms**

Level Four (Specific Solutions)

Now What

**i.e. Switch to Solar Energy on
Homes and Businesses**

(Now cheaper in 16 states to use solar energy than fossil fuels, including California, and programs like MCE and Google Project Sunroof are there to help)

Take-Away #1:

Well-framed conversations have power.

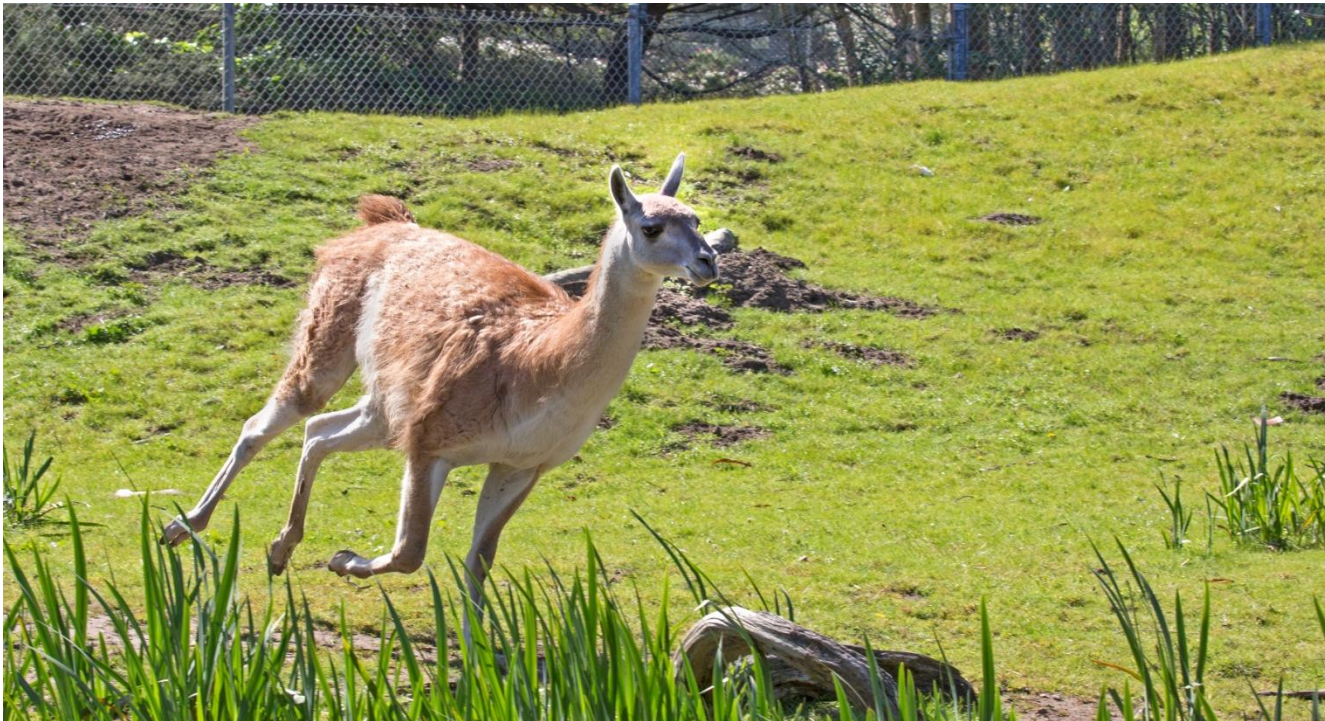
Well-framed conversations:

- (1) get people to think like citizens
and
- (2) activate networks of supporters.



Take-Away #2:

Social change is a marathon, not a sprint.



Conversations happen on multiple levels with multiple stakeholders over time.

Take-Away #3:

Every Conversation is a Victory

- Each person you reach will be in a different place on their path to understanding and action



- The road to change is a very long journey
- You are a guide along the way; you don't need to drag them across the finish line
- Our colleagues are likely to reach them as well, and our work will prepare them for more of the story!

Take-Away #4:

Skilled framers in science centers are key to shifting the public conversation on climate.

It is time to wake up the “sleeping giant.”



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ALYSSA ISAKOWER | DECEMBER 16, 2014



The average person has 50,000 – 70,000 thoughts every single day. That's a LOT of ideas to be sorted and dealt with! Considering the mental maelstrom, how can we make the complex threat of climate change seem worth not only thinking about, but possibly making major life changes to address?

One reason climate change is so hard to act on is our psychological distance from it. The harm from climate change seems to be physically distant from us, far off in the future, and happening to other people. These factors make climate action seem a lot less important than the many other concerns constantly fighting for our attention all day long.

For more on bringing climate closer-to-home [check out Connecting on Climate: A Guide to Effective Climate Change Communication guide](#). The guide covers a variety of great topics, insights on making the local connection start on page 29. It's extremely important to [close this psychological distance](#) for your audience so that they can give climate action the attention it deserves.

Pair close-to-home examples with big-picture concepts

ARCHIVES

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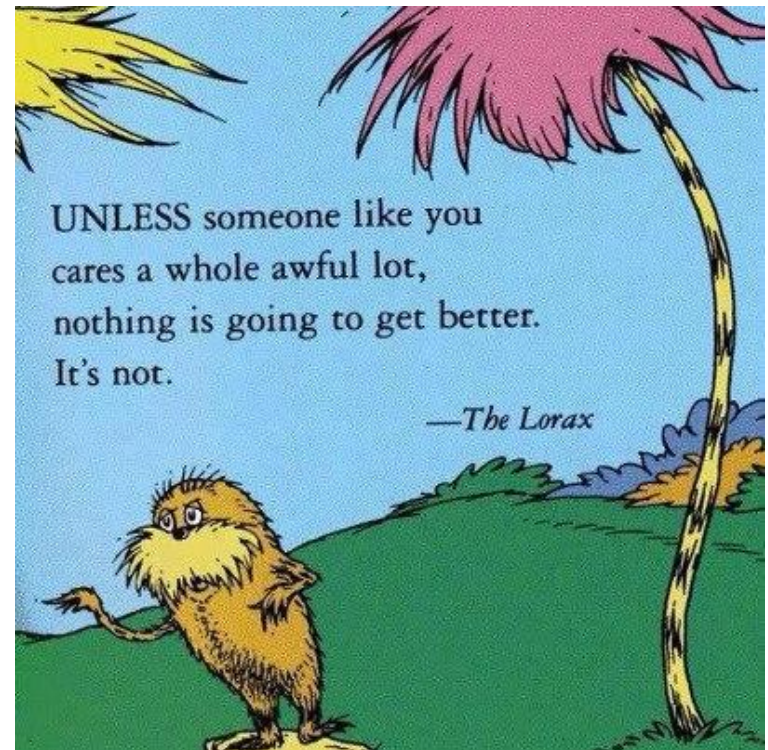
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After-all, my motto is...

Conversation before Conservation!!

- Armed with the tools of a master-framer, we can frame (or reframe) any topic
 - ▣ Keep it conversational
 - ▣ Start with a value
 - ▣ Avoid the swamp
 - ▣ Use tested metaphors
 - ▣ Promote collective solutions
 - ▣ Stay Positive/Get Excited

Go forth and Frame!



Thanks to the following:



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