

National Marine Sanctuaries
National Oceanic and Atmospheric Administration



NATIONAL MARINE
SANCTUARIES

Making Climate Change Communication Stick with Framing






By: Marlies Tumolo



NATIONAL MARINE SANCTUARY SYSTEM

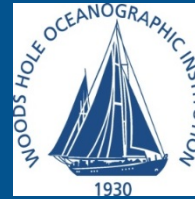


-  National Marine Sanctuary
-  Marine National Monument
-  Proposed National Marine Sanctuary

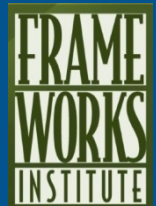
Scale varies in this perspective. Adapted from National Geographic Maps.

How does climate change work?





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.



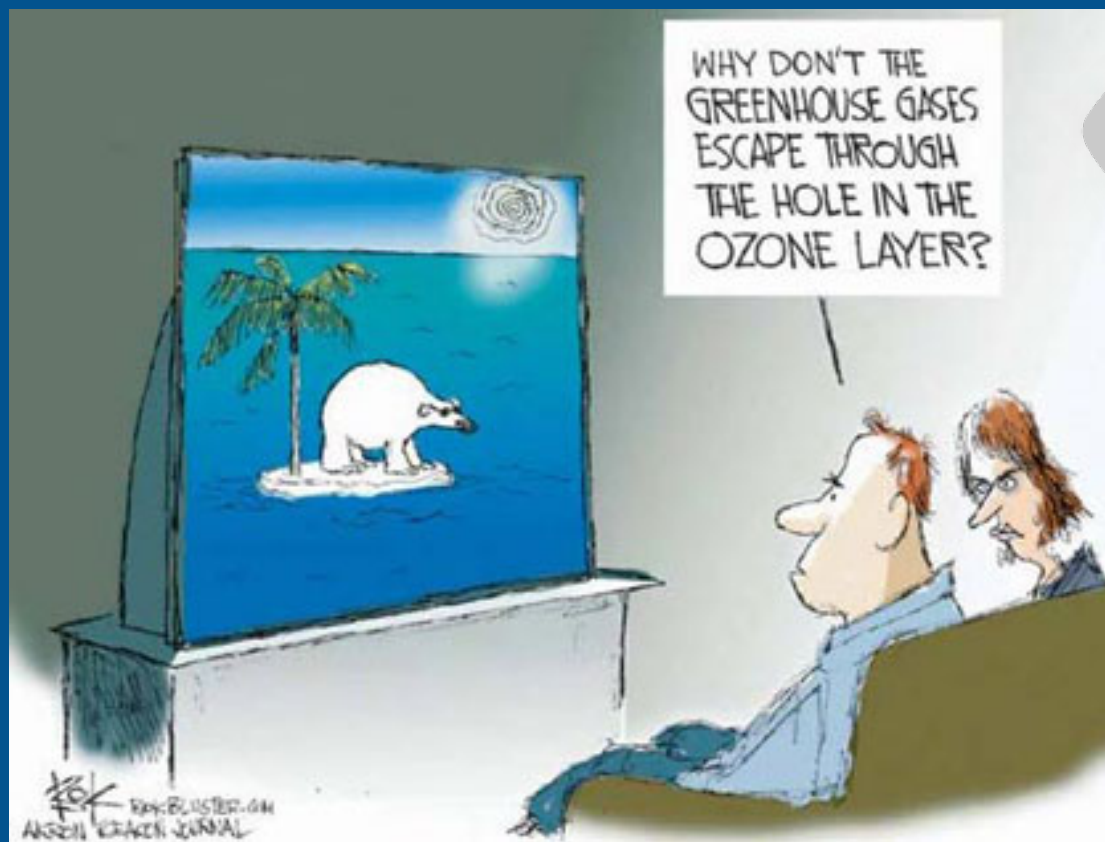
NNOCCI National Network for Ocean and Climate Change Interpretation

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

NNOCCI National Network for Ocean and Climate Change Interpretation



Clear up misconceptions about climate change.



Strategic Framing Roadmap

1 Use a conversational
tone

2 Lead with
a value

3 Put issues into context

4 Use tested metaphors

5 Connect
to
solutions

6 Awaken
social
responsibility!

Know your audience:

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

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

Science

- How do scientists know that?
- New study every week
- My observation is as good as yours
- "Scientists say"
- Science is innovation



What's in the swamp of...

Ocean & Climate Change



Climate Change

- 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

Consumerism

- Eat it while you can!
- Bottomless grocery store
- Jobs vs. environment
- Cost/benefit thinking
- Ecosystems are valuable resources

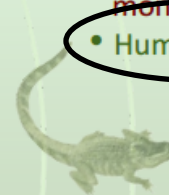


Public Affairs

- 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

Pollution

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



Lead with a value

Protection
or
Responsible
Management



Fill in gaps with a metaphor



Explanatory

Metaphors = simple
memorable
explanations that can
fill in cognitive gaps

Metaphors Are Sticky



Heat-Trapping Blanket

A metaphor for the basic mechanism of climate change



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.

Metaphors Explain



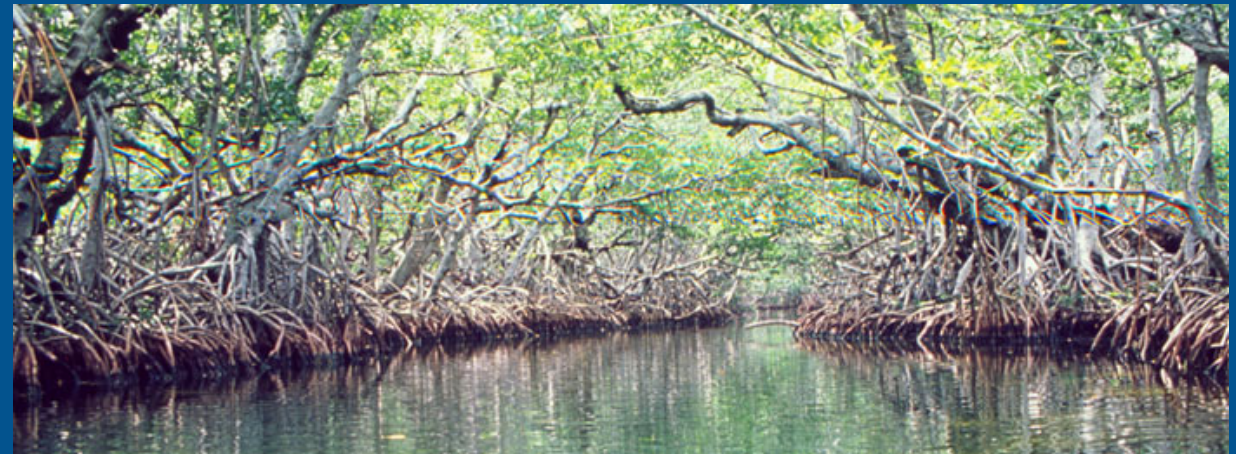
Regular and Rampant CO₂

A metaphor for anthropogenic carbon dioxide



The story you're telling:
"Regular" carbon dioxide is used and created by normal life processes, but "Rampant" carbon dioxide comes from burning fossil fuels for energy. We need to reduce rampant CO₂. It's getting out of control.

Now on to solutions!



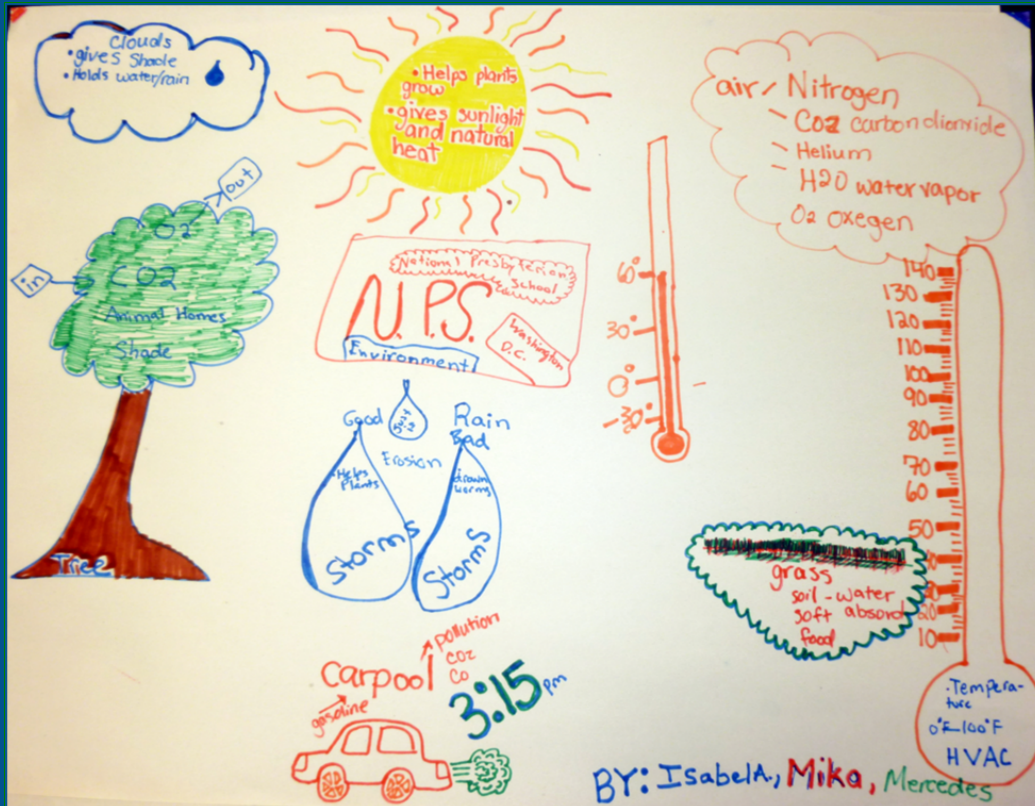
Reframing Solutions in Action

Individual  Collective

- Ride your bike
- Use reusable bags
- Support bike shares
- Support plastic bag bans

Now you try! In the question box provide an example of reframing an individual action to a collective solution.

Student-Led Solutions



GO GREEN. THINK BLUE.
Caring for our watersheds and ocean

STUDENTS FOR ZERO WASTE WEEK

Join our local students in their efforts to minimize waste in the community and help keep our ocean clean.

ZERO

ZERO PLASTIC STRAWS • ZERO ZIPLOC BAGS
ZERO PLASTIC WRAPPERS
ZERO PLASTIC BOTTLES • ZERO PLASTIC BAGS

ARTWORK FROM LOS ARBOLES MIDDLE SCHOOL, MARINA CA

Strategic Framing Road Map

- ✓ Use a **conversational** tone
- ✓ Lead with a **value**
- ✓ Put issues into **context**
- ✓ Use tested **metaphors**
- ✓ Connect to **solutions**
- ✓ Awaken **social responsibility**



Photo: Patrick O'Duffy

Takeaways...

- Simple, effective, tested tools
- Practice makes perfect
- You have support!
 - Climate Stewards (<http://oceanservice.noaa.gov/education/climate-stewards>)
 - Climate Interpreter (<http://climateinterpreter.org/>)
- Strategic Framing leads to solutions

**Together we have the power to
inspire change!**



Where can I learn more?

- **Frameworks Academy free online course:**
 - <http://frameworksacademy.org/collections/specialized-sponsored-courses/products/changing-the-conversation-on-ocean-and-climate-change>
- **Read the research!**
 - <http://www.frameworksinstitute.org/climate-change-and-the-ocean.html>
- **Yale Project on Climate Change Communication**
 - <http://environment.yale.edu/climate-communication/>
- **Contact Marlies (marlies.tumolo@noaa.gov) with any questions**

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California Sea Lion

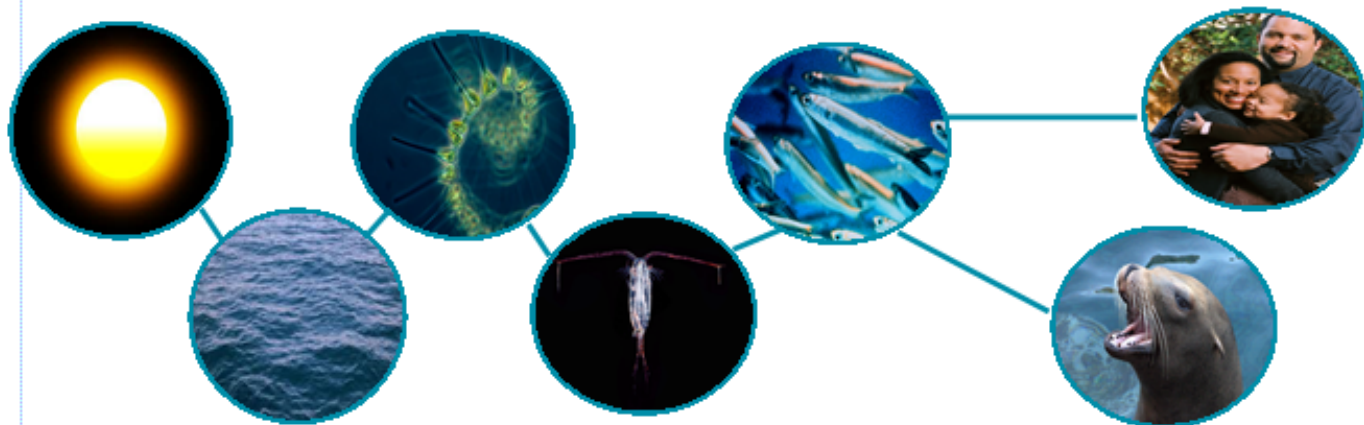


We must protect the ocean, and special places like national marine sanctuaries, for future generations.

WHY?

When we protect the ocean, the home of sea lions like Sanctuary Sam, we also protect ourselves!

The ocean is warming and that messes up the food web that we depend on.



Humans and California sea lions, like Sanctuary Sam, eat fish. As the ocean becomes warmer California sea lions are having a harder time finding food. The fish that they usually eat are moving further away to stay in the cooler water that they find comfortable. This means that sea lions have to travel further and search longer to find the food that they need.

<http://sanctuaries.noaa.gov/education>



We use fossil fuels like coal, oil, and natural gas for energy. We also use them to make plastic. When we burn these fossil fuels carbon dioxide (CO₂) is emitted into the atmosphere and acts like a heat trapping blanket that warms our planet and ocean.



**What can
we do?**

Here's how we can make a difference:

Use reusable products and reduce the demand for disposable plastics. Making less plastic leads to burning less fossil fuels. This means that less CO₂ is emitted into the atmosphere.

Encourage your school to be a part of the community solution by limiting their use of plastic bags and water bottles and by running a zero waste week campaign.

<http://sanctuaries.noaa.gov/education/zero-waste-week/>

Metaphors Fill in the Gaps

climate \longleftrightarrow ? \longleftrightarrow ocean?



Climate's Heart

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



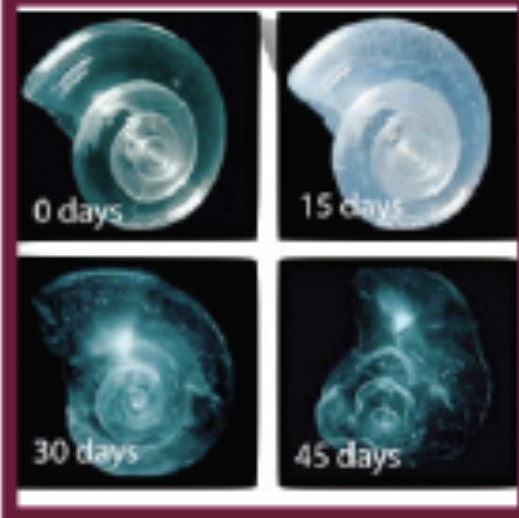
The story you're telling:
Just as a heart circulates blood and regulates the body's temperature, the ocean controls the circulation of heat and moisture throughout the climate system.

Metaphors Paint a Picture



Osteoporosis of the Sea

A metaphor for some of the effects of ocean acidification



The story you're telling:
Ocean acidification changes the chemistry of the ocean and causes "osteoporosis of the sea," which prevents animals at the bottom of the food chain from building and maintaining the protective shells they need to survive.