Value

Protection

Why does it matter? What's at stake?

The story you're telling:

We must protect people and places from being harmed by the issues facing our environment.

Strategically redirects thinking away from patterns such as:

• Bottomless Grocery Store • Change Is Natural/Fatalism • Individualism
• Nature Will Fix Itself • Nature Works in Cycles • Solution = Recycling

Concepts and ideas included in this frame element:

- We must **protect and preserve the habitats and ecosystems** we depend on.

- Showing **concern for the welfare of others** is the right thing to do.

- **Stepping in to ensure the people's safety and wellbeing.**

- Sense of agency: protection means **actively eliminating or reducing risks.**

- Sense of urgency: let's be vigilant in **shielding and safeguarding habitats and people** from harm.

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Responsible Management

Why does it matter? What's at stake?

The story you're telling:

Taking practical, common sense steps to address problems facing our environment today is in the best interest of future generations.

Strategically redirects thinking away from patterns such as:

• Change Is Natural/Fatalism • Eat It While You Can • Individualism
• Nature Will Fix Itself • Nature Works In Cycles • Solution = Recycling

Concepts and ideas included in this frame element:

- 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 and plans we make today.

- **Practical, feasible, step-by-step** approaches allow us to make real progress on longstanding challenges and obstacles.

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.

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

Concepts and ideas included in this frame element:

- **The atmosphere is like a blanket that surrounds the earth:** establishing the blanket metaphor early, and making sure it is understood as a metaphor, helps translate the underlying science with fidelity.

- **When we burn fossil fuels like coal and natural gas for energy, we add carbon dioxide to this blanket, which is like thickening the blanket:** corrects the misconception that the problem is caused by the hole in the ozone; reinforces how human activities lead to warming, facilitating solutions thinking.

- **The thicker a blanket gets, the more heat it traps underneath:** establishes the basic mechanism, and paints a clear picture of where the heat gets trapped (under the blanket), as well as the idea that it becomes more difficult for heat to escape.

- **The "blanket effect" leads to warming, which disrupts the climate:** communicates that warming is a problem, not equivalent to the pleasant warmth of a day a little sunnier than others.

- **For example, this extra heat results in:** once you have introduced the metaphor, continue to explain an impact of climate change, so that you don't leave the impression that the increasing warmth of the atmosphere/ocean is a trivial matter or even beneficial.

- **Reducing our emissions of heat-trapping gases is the solution:** focusing on the heat-trapping effect has more powerful frame effects than the alternative metaphors greenhouse gases or carbon pollution.

Explanatory Metaphor

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.

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?

Concepts and ideas included in this frame element:

- Plants grow by using the regular carbon dioxide that animals exhale, and so some CO$_2$ is part of normal life processes: provides a way to engage prior understandings of carbon dioxide, reducing confusion with carbon monoxide.

- But we are also adding carbon dioxide to the air when we burn oil, coal, or natural gas for energy: channels attention to the specific human activities that are the underlying cause, allowing people to reason their way to well-matched solutions.

- We can call this "Rampant CO$_2$" because there's too much of it and it is getting out of control: identifies carbon dioxide as the problem. Providing context cues when introducing the word "rampant" can broaden the comprehension of this relatively low-frequency vocabulary word.

- Rampant carbon dioxide builds up in the atmosphere and ocean where it causes problems for the earth's climate and ecosystems: overrides the assumption that CO$_2$, in any amount, is always "good" by specifying that CO$_2$ emissions are harmful.

- When rampant carbon dioxide builds up in the atmosphere/ocean, it creates a heat-trapping blanket/changes the chemistry of the ocean: communicators can pivot to other framing tools and techniques to expand on the impacts of rampant CO$_2$.

- Now that we know about rampant carbon dioxide, we need to rethink and reduce our use of fossil fuels: communicators can use this language or other preferred solutions, but it's important to close with a suggested course of action that matches the scale of the problem. (From a framing perspective, emphasizing solutions that require a shift in energy policy is a better use of communications opportunities than focusing on those that highlight adaptation.)

Explanatory Metaphor

Climate 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.

Strategically redirects thinking away from patterns such as:

• Change Is Natural/Fatalism • Climate = Weather • Climate System? What System?
• Nature Will Heal Itself • Ocean and Land = Separate Worlds
• Ocean Is Too Big to be Harmed • Ocean Problems = Material Pollution
• Science Is Uncertain

Concepts and ideas in this frame element:

- **The ocean regulates the climate system the way your heart regulates the flow of blood throughout your body:** conveys the centrality of the ocean within the climate system.

- **As the heart of the climate's circulatory system, the ocean maintains the earth's temperatures:** after making this analogy, fill in critical information about how the ocean functions like a circulatory system. (Specify how the ocean controls the earth's temperature by moving heat and moisture via currents and winds, and stabilizes the earth's temperature by absorbing heat from the sun and transferring it to different parts of the climate system.)

- **When we burn fossil fuels, we put a lot of stress on the ocean, damaging its ability to keep the climate stable:** facilitates thinking about how the ocean can be harmed by human activities and frames the problem as one of energy use.

- **As a result of this stress, sometimes the ocean pumps too much heat and moisture throughout the system, sometimes too little:** provides an explanation of why there are differential effects of climate change in different parts of the world.

- **A heart must be monitored and cared for to ensure overall health and functioning, and the best care is preventative care:** opens up the conversation to the frame element of Solutions, allowing for a productive consideration of meaningful, collective actions.

- **If we think about the ocean as the heart of the climate, we can see that we need to prevent further damage to it. We need to rethink our society's reliance on fossil fuels for energy:** communicators can use this language or other preferred solutions, but it's important to close with a suggested course of action that matches the scale of the problem.

User Notes:

- **Avoid cueing up crisis thinking:** don't talk about fatal heart attacks, or death from heart disease, and don't explicitly state that "we can't live without our heart."

- **Avoid individualizing the issue:** a major goal of this metaphor is to help the public understand the climate as a system. Talking about individual solutions, such as "riding your bike to keep your heart, and the climate's heart, healthy and strong," undoes the important work of setting up systems-level thinking.

- **Avoid anthropomorphizing the earth, atmosphere, or ocean:** limit the analogy to human anatomy to the essential comparisons only—e.g., hearts are essential; circulation works like so; avoiding stresses to the heart is a good way to take care of it.

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Explanatory Metaphor

Osteoporosis of the Seas

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.

## Strategically redirects thinking away from patterns such as:

• Nature Will Fix Itself • Nature Works In Cycles • Ocean Acidification—What's That?
• Ocean Is Too Big to Be Harmed • Ocean Problems = Material Pollution

Concepts and ideas included in this frame element:

- The ocean absorbs the extra carbon dioxide we emit into the atmosphere when we burn fossil fuels, and that changes the chemistry of the ocean. We call this "ocean acidification": introduces the essential background of the problem through a clear, concise explanatory chain.

- The change in chemistry is reducing the amount of calcium carbonate in the ocean: explains how ocean acidification changes the chemistry of the ocean.

- Just as humans need calcium to build their bones, sea creatures need calcium carbonate to build strong skeletons and shells: makes the analogy between bone formation on land and shell formation in the sea.

- As a result of the changing chemistry, we are seeing "osteoporosis of the sea," with sea creatures' skeletons and shells becoming thinner or more brittle: establishes the topic as a problem in such a way that people can reason their way to a sensible solution.

- For example, this species is affected in this way which in turn: illustrates the interdependence of species by showing how direct effects on one creature lead to effects on others.

- Osteoporosis of the sea disrupts the food chain, undermining the stability of the ocean's ecosystems: brings the issue into a wider context by clarifying its impacts at a systems level.

- Now that we know about osteoporosis of the sea, we need to rethink our use of fossil fuels: communicators can use this language or other preferred solutions, but it's important to close with a suggested course of action that matches the scale of the problem.
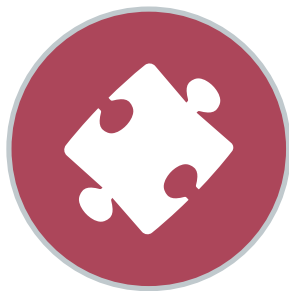
Frame Element

Solutions

The Solutions frame element fosters hope and instills a sense of agency and efficacy.

The story you're telling:

Concern for our climate is normal and action on climate is happening all around us. We can come together as citizens to address climate change and help change the decision-making context so that the sustainable choice is the easy choice for more Americans.

Strategically redirects thinking away from patterns such as:

• Even if we do our part, other countries won't • Big, Scary, Depressing • Crisis
• Change is natural / Fatalism • Just clean it up • Nature is self-correcting
• Solution = Recycling

Concepts and ideas included in this frame element:

- Concern for our climate is normal.

- As a network, we promote solutions that:

  - **Focus on Energy Shift** – move away from fossil fuels towards renewable energy.

  - **Focus on Energy Efficiency** – reduce our demand for and use of fossil fuels.

  - **Talk about it!** – empower others to raise the topic of climate change in more settings.

- The work is collective: By offering opportunities where people are coming together, the scale of the response will be seen as matching the size, scale, and scope of the problem.

User Notes:

- **Be Specific: Concrete examples help model that change is possible!**

  - Be specific! Highlight a program or an action that is happening.

  - Be explicit about how people can work together to push this solution forward as citizens.

- **Reinforce with Other Frame Elements: Avoid the swamp by bolstering Solutions with other frame elements!**

  - Cue the Responsible Management or Protection value to remind people why this action matters.

  - Use explanation to connect the solution to reducing or eliminating carbon dioxide emissions (we don't want people to miss or misunderstand how this action connects to our carbon dioxide problem).

- **Bring Others Along: Invite others to remember we're all in this together!**

  - Reinforce that concern for our climate is normal.

  - Invite people to talk to others.

- **Avoid polarizing language**

  - Rather than using these words: Politicians, Policies, Laws/Regulations, Government.

  - Try these instead: Civic leaders, Approaches, Programs, State or City name.