

Climate Communications and Behavior Change

A Guide for Practitioners



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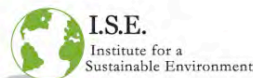
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About the Climate Leadership Initiative and the Social Capital Project

CLI is a social science-based global climate change research, education and technical assistance organization. CLI is jointly supported and administered by The Resource Innovation Group, an independent 501(c)(3) non-profit and the Institute for a Sustainable Environment at the University of Oregon.

CLI's Social Capital Project seeks to engage the public in addressing global warming by building the capacity of climate leaders to communicate effectively and develop outreach strategies that overcome barriers to behavior change.

Comments on the guide as well as additional information on best practices are welcome and encouraged. Please contact Cara Pike, director of CLI's Social Capital Project, at cara@thesocialcapitalproject.org.

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PREFACE

At its heart, global warming is a cognitive and behavior change challenge. Public support for taking action to address global warming is declining just as it is needed most to implement emission reductions and climate preparedness programs and push for new policies. Even if new climate policies are enacted, in the short term they are unlikely to stabilize emissions due to their long ramp-up periods and many challenges involved with implementation. This is particularly concerning given recent evidence that indicates global warming is occurring more quickly than originally projected. Carbon dioxide and other heat-trapping gas emissions must be dramatically reduced as soon as possible.

To address global warming there must be a shift in thinking and behavior that motivates people and organizations to engage in emissions reductions and climate preparedness activities and support new policies. Mounting evidence shows that this shift is not only possible, but an important part of a national strategy. Even simple actions taken at the household and organizational levels can rapidly and significantly reduce carbon emissions.¹ Making these changes would buy time and build public support for new policies that could spur greater reductions.

In order to motivate people to alter their views and behaviors related to global warming, leaders within all levels of government, the private sector, non-profits and communities must become aware of and utilize the fundamentals of effective climate communications, outreach, and behavioral change mechanisms.

To address this need, the Social Capital Project of the Climate Leadership Initiative has developed this guidebook, which draws on extensive global warming, behavior change and communications research completed by our organization and others as well as from practitioner expertise. The guide distills this information into tools and recommendations that climate leaders can easily apply. It includes talking points that have been tested with the public as well as quotes from focus group participants that reflect the attitudes of many Americans about global warming.

The guide is organized into two sections:

- **Part One: The Role of Tension, Efficacy, and Benefits in the Global Warming Conversation**
This section illustrates the challenges with existing climate communication efforts and provides tips on how to frame and deliver outreach efforts in a way that motivates changes in thinking and behavior.
- **Part Two: Understanding and Connecting with Audiences**
This section offers detailed advice and tips on how to frame global warming communications and promote behavior change in ways that resonate with a range of audience segments.

¹ Dietz, T., Gardner, G. T., et al. (2009). "Household actions can provide a behavioral wedge to rapidly reduce U.S. carbon emissions." Proceedings of the National Academy of Sciences

INTRODUCTION

Addressing global warming calls for changes in beliefs, assumptions and thinking about the environment, economy and our well-being.

If you close your eyes and think about global warming, it is hard to picture. We can't see carbon dioxide and other heat-trapping gases building up in the atmosphere. Carbon comes from endless sources, not just the obvious places that come to mind when we think about pollution such as smoke stacks. We hear the term global warming yet there are freak snowstorms and record low temperatures in places not expected. How can we get our head around a problem that we can't see, touch or feel yet involves major risks to life on Earth as we know it?



WHAT AMERICANS ARE SAYING:

“You really can't put a face on it and when you say 'global' it's like oh my gosh, it's all over the world. Little old me is not going to have any big effect on that.”

Dealing with risk is something people do all the time. People's perception of risk is not just based on factual data but on their values and worldviews. As a result, the ways in which risks are framed and how people within our social networks respond to those frames greatly influence the decision to act. Framing is not simply messaging; it is a conceptual exercise that involves tying ideas together into a comprehensive picture that makes it easier for people to organize information and sort out its relevance to their lives. When it comes to global warming, framing requires fundamentally rethinking how we live and the resources necessary to power those lifestyles.



This is no small task. At present, our society is operating within what can be called a **Take-Make-Waste** economic system. We take resources from the earth, use them to power our economy and convert them to goods and services for our use. Massive amounts of often toxic waste—including carbon emissions—are then dumped back into the same resource base we rely on for our sustenance without considering the negative consequences for the overall system. The Take-Make-Waste system made sense when it emerged at the dawn of the industrial revolution because resources were plentiful and there were few people. Today, however, the rapid speed of global warming and related economic and social consequences make clear that a new economic model driven by thinking about the links between the environment, economy and social wellbeing is needed.

Common Sustainable Thinking Blunders

To change beliefs, assumptions and thoughts related to the environment, economy and our well-being, a number of common blunders must be overcome.

1	Confirmation Bias	Most people look for evidence that confirms existing beliefs and tend to reject contradictory information.
2	Misplaced Confidence	It is easy to assume the future will be similar to the past, making it difficult to identify mistakes and alter behavior when conditions change.
3	Wishful Thinking	We tend to believe favorable outcomes are more likely to happen than undesirable ones.
4	Belief Polarization	Many choose to associate only with people who share their views.

We now need to move to what can be called a **Borrow-Use-Replenish** economic model. In this system, raw materials are extracted from the Earth, those materials are converted into energy, goods and services for human use and the by-products of this system are either returned to the economy for future use or returned back to nature as nutrients for further use without degrading the structure and functions of the climate or natural environment. The closed-loop Borrow-Use-Replenish model should not be seen as a major departure from our current economic system. To the contrary, it is already emerging because it is the next logical step in thinking that incorporates social and ecological well-being into our core assumptions and beliefs.

In addition to re-envisioning our economic model, we also need to re-evaluate some of our worldviews. The majority of Americans may accept that global warming is occurring yet they are increasingly fatalistic about their own lives, let alone our ability to address global warming. Even people who already care have a hard time imagining how they can make a dent in such a massive global challenge and they question governments' ability to do the same.

To increase public support for taking action on global warming, the public's role in creating change must be reframed by tapping into people's basic need to feel that their lives have meaning. Successful public engagement in global warming requires connecting people to one another through a shared sense of purpose.

PART ONE: The Role of Tension, Efficacy, and Benefits in the Global Warming Conversation



How do changes in thinking and behavior come about? What does it take for individuals, organizations or society to shift their practices? Despite their common use, guilt, fear, and shame do not often motivate people to change their behavior and support effective policies. If these tactics don't work, what does?

The behavior of each one of us is shaped by deeply held core beliefs and assumptions about how the world works and our place in it. Many people believe that nature has an infinite capacity to provide resources for humans and an unlimited capacity to absorb waste, which has helped to deeply embed the Take-Make-Waste model in our culture. People who hold this view automatically respond to information that appears contradictory by ignoring, denying, or challenging it and continue doing what they are doing such as emitting carbon, even if it is self-destructive.

To help people, organizations, and societies challenge their automatic thoughts and behaviors, outreach strategies must incorporate three fundamental elements of change. From smoking cessation to promoting corporate sustainability, successful behavior change programs illustrate that there must be sufficient tension, efficacy, and benefits present to make deep-seated shifts.

Step 1: Creating the Tension Required to Motivate People to Address Global Warming

General concern about global warming is not enough. For people, organizations or society as a whole to take meaningful action, they must feel sufficient “tension” (dissonance) between some deeply held goals or values and their current condition. For example, people must be sufficiently worried that global warming threatens their jobs, families, communities, or other things they deeply care about. Taking personal action or supporting policies to address the issue becomes consistent with their values and helps to resolve the tension. Social Capital Project research points to a number of cognitive challenges that block the public from feeling a sense of tension around global warming. These challenges illustrate common pitfalls in outreach and framing efforts.

Six Challenges in Building Tension for Action

1. The Terrarium Challenge

“You watch those commercials (about polar bears), and I cry when I see them. I just can’t stand to see them sitting on their little ice floe that used to be Greenland and now it’s two ice cubes in the middle of the ocean.”

When most people think about the environment, they think about nature or plants and animals, rather than the broader system we are a part of that is foundational to our existence. Most Americans don’t see how changes in the environment can affect them and as a result, they prioritize issues with clear direct impacts, such as jobs and health care. When people think about global warming, they think about the image of a polar bear on a shrinking iceberg, not how it will disrupt the lives of the average American.

2. The Weather Challenge

“You can’t do anything about the weather.”

Most people focus on day-to-day changes in the weather and do not understand the relationship between these changes and the larger climate patterns that play out over time. In addition, the majority of Americans lack a basic understanding of the mechanisms of global warming and as a result find it hard to believe that humans can impact the weather.



3. The Warming Challenge

“People are talking about global warming. It’s freezing outside.”

For many, global warming is thought of as a slight rise in average temperatures, rather than as a fundamental destabilization of the Earth’s climate system. This makes it easy to caricature global warming and dismiss its importance. When there are record snowfalls, for example, people have a hard time believing in global warming.

4. The Someday Challenge

“It’s a tough problem. We need those green jobs that they’re talking about to invent technologies that haven’t been invented yet.”

Because Americans are future-oriented and optimistic, imagining a time when we will have clean energy, electric cars, smart houses, and clean skies is not hard to do. Yet, most people don’t think that these solutions are ready or that they can be taken to a large enough scale. While talking about “a clean energy future” offers a positive vision of progress, positions the United States as a world leader, and counters frames of environmentalism as anti-progress, it can also diminish a sense of urgency about global warming. When energy solutions are associated with the future, they are forever distant and the path to them unclear.

5. The Technology Will Save Us Challenge

“I don’t remember exactly what it was, but they talked about putting the CO2 back into the ground and storing it. I think they’ve started doing that in Germany.”

Even if it is in the future, many Americans believe that experts will eventually come up with technological solutions to global warming. This reduces the need for changes in behavior or the enactment of new policies now. This is not surprising given the rapid pace of technological development that Americans have experienced and the benefits of that development most have experienced. The problem is that this notion reduces the sense that we need to make lifestyle and systemic changes in our culture.

6. The Long List of Impacts Challenge

Highlighting a lot of examples of frightening global warming impacts does not increase issue urgency. In fact, a long list of impacts can seem exaggerated or disconnected from people's daily lives. For some, it can be overwhelming to the point that they check out or become defensive of the current American lifestyle, particularly if solutions for addressing impacts are left out of the conversation.

“GLOBAL WARMING” OR “CLIMATE CHANGE”?

The Need to Build Awareness of Larger Climate Impacts

While some Americans—mainly scientists and highly educated people—respond more favorably to the term “climate change,” most Americans are more familiar with the term “global warming.”

Unfortunately, neither term is ideal. “Global warming” sounds serious and something that could be caused by human activities, yet it leads to the warming problem mentioned above. “Climate change” is a more accurate term and is motivating for those who understand climate systems. Yet for many others, “climate change” lacks a sense of speed or urgency, sounding more like a natural, gradual cycle.

Communicators can take advantage of how common a term global warming has become, but at the same time there is a need to build awareness of impacts beyond warming.

The following terms are not common with the public, yet Social Capital Project research shows they resonate well and help create tension around global warming:

“Rapid climate shift”

“Climate disruption”

“Climate shock”

“Climate breakdown”

“Climate failure”

More work is needed to determine which of these terms has the greatest potential to build proper understanding of the issue.



Creating the Tension Required to Motivate People to Address Global Warming

To motivate people to alter their thinking and behavior, global warming must be better understood and made more relevant to people's lives and the things they deeply care about. The following framing approaches have proven effective in adding tension to the global warming conversation.

1. Illustrate what it means for the climate to change.
2. Leverage the idea of "too much carbon."
3. Clarify the relationship between energy production and consumption and global warming.
4. Emphasize that we are facing a moment of choice.

1. Illustrate What It Means For the Climate to Change

Global warming provides an opportunity to change the environmental frame from one of protecting a separate nature to one of people working together to improve their quality of life. Global warming touches upon health, national security, the economy, energy, etc. and reminds us that we are part of and reliant on nature and on each other.

To take advantage of this opportunity, it is important to go beyond the idea that global warming just involves a gradual temperature increase and to begin to convey how our lives are dependent on a stable climate.

Talking Points:

- Global warming isn't just about temperature – it is about the basic weather patterns that make up our climate, including wind and rainfall patterns and storms.
- The climate is the very foundation of our lives. It is like the ground under our feet, and if the climate shifts, it is like the ground shifting with very dramatic consequences.
- Every aspect of our lives depends on a stable climate. For example, we count on water supplies that only exist in a certain kind of climate. Our agriculture depends on particular ranges of temperature and rainfall and we build near the shore expecting sea levels to stay the same.
- Weather patterns affect just about everything in our lives – the capacity to grow the food we eat, the kinds of infectious diseases and pests that can thrive in our region and affect our health, the ability to keep our homes and families safe from extreme weather, etc.

2. Leverage the Idea of “Too Much Carbon”

While there are a number of greenhouse gases contributing to global warming, carbon dioxide is the most important single contributor. As a result, start the awareness building process with the simple idea that “humans are putting too much carbon into the atmosphere/air.” Using “too much carbon” allows people to get a handle on the (deeply counterintuitive) idea of global warming and provides a conceptual link to most climate policies.

tip

Use Simple Terms such as:

“Carbon Overload” - refers to the excess of carbon being put into the atmosphere (or other “containers” such as forests, topsoil, or ocean).

“Carbon Load” - refers to the amount of carbon stored in the atmosphere (or other “container”).

Talking Points:

- Global warming happens when we overload the atmosphere with carbon. We’re putting too much carbon where it doesn’t belong.
- Simply put, we’re putting too much carbon into the atmosphere, by burning fossil fuels such as coal for energy. The good news is that we can deal with our carbon problem with solutions that exist today.



High school students in Cohasset, MA show the size of one ton of carbon dioxide. www.energyrace.com

tip

Build on “too much carbon” to teach other global warming basics.

The idea of “too much carbon” can be a building block for creating a deeper understanding of the carbon cycle and easily integrates with another fundamental concept—the idea that global warming happens because heat is being trapped by a layer of carbon. This idea can be conveyed through an analogy with a thickening “blanket”—a term/image used in the first Intergovernmental Panel on Climate Change (IPCC) report that has become more common over time.

Talking Point:

- As we continue to put carbon in the air (by burning fossil fuels) we are creating a thickening layer in the atmosphere that is trapping in heat around the globe.

tip

Use “too much carbon” and the idea of carbon management to recruit budget thinking.

By giving global warming a sense of mass or weight, the phrase “too much carbon” quantifies the problem and shifts it from something that is unmanageable to something that can be counted and reduced. This works well because the human brain is wired to economize. The power of budget-making is clear in a wide variety of contexts, for example in the success (and effectiveness) of the Weight Watchers program.

tip

Focus the conversation on the reduction of carbon.

By clarifying that the problem is one of “too much carbon,” then the solution is to deal with excess carbon, by reducing or capturing emissions, versus being distracted by pseudo-solutions or by thinking there is nothing that can be done. “Too much carbon” also challenges the dominant Take-Make-Waste frame that positions carbon as an inevitable by-product of our economic system, rather than something that can and should be managed.



Use “too much carbon” to connect global warming to forests and oceans.

When we give global warming a sense of weightiness, people can begin to understand that overloading the oceans with carbon damages marine life, and that forests store carbon and should be preserved for that reason.

Talking Point:

- Burning carbon-based fuels isn’t just causing global warming. The carbon that falls back down into the ocean makes the water more acidic. Higher acidity damages anything with a shell – from tiny organisms that are basic to the food chain to more familiar creatures such as shellfish and coral.



3. Convey the link between energy and global warming

Not everyone naturally makes the mental leap between global warming and energy production and consumption. Many Americans do not know how energy is produced and do not associate their energy use with having an environmental impact.



Make the connections between energy, carbon and global warming so that the issue is not confused with general ideas about pollution.

Talking Point:

- Burning fossil fuels is what puts carbon into the atmosphere— whether it’s for fuel for our cars or to keep the lights on. For example, most of our electricity comes from burning coal.



Clarify what is meant by “clean energy” and how a given approach addresses global warming. Avoid fuzzy terms such as “green energy” and “sustainable energy” because they fail to convey the type of solutions that are needed. Use terms such as “carbon-free” to help clarify what is meant by clean or green energy.



Take advantage of how people associate **renewable energy** with solar, wind and geothermal sources. Be sure to emphasize the successful use of renewable energy technologies so public perceptions that these alternatives are not yet ready to be put to use can be overcome. When it comes to **biofuels**, clarify how they are produced (ideally from agricultural waste or used vegetable oil rather than corn-based ethanol).

tip

Most Americans think using less energy is a good idea. Illustrate the opportunities associated with **energy efficiency** as a way to overcome the term's lack of power and urgency. For example, offer concrete examples of policy change to promote efficiency such as strengthening energy codes for new buildings, enhancing energy efficiency standards for appliances or providing tax incentives for homes and businesses that use energy more efficiently.

Talking Points:

- We need to use energy more efficiently, so that we burn less coal, oil and gas.
- Building more energy-efficient houses, buildings, and appliances will reduce costs, get Americans back to work and address global warming at the same time.

4. Emphasize That We Are At a Crossroads

Many Americans care about global warming but believe that addressing it can wait compared to job creation and economic recovery. Conversations about global warming should be framed in a way that emphasizes the need to take concrete, immediate steps.

Conveying the idea of being at a crossroads is more effective than outreach that simply urges people to act. By emphasizing a moment of choice, we are in a position of being accountable for not acting. Rather than coasting along, we are jolted out of default mode so that inaction becomes irresponsible, shortsighted, and not prudent.

tip

Illustrate how ignoring global warming will let the problem get worse, leading to more damage and costs over time. Talk about how taking smart and responsible steps now is the common sense approach.

tip

Focus on the need for immediate action, rather than emphasizing a future transformation. For example, a clean energy future may sound visionary and motivating, but not necessarily urgent.

Talking Points:

- As many leaders have said, the time for arguing and delaying in past. We are at a crossroads, with a choice between responsibly addressing the problem now, or dealing with severe consequences later.
- Global warming is an urgent problem, like termites eating away at the foundation of your house. If you ignore the problem, the result will be serious structural damage.
- Shifting away from the carbon-based fossil fuels that cause global warming will create good new jobs for millions of Americans. The U.S. can either lead and take advantage of this shift, or miss the boat as other countries act more swiftly. For example, China is working hard to be the world's leader in electric cars yet we continue to lag behind.



Step 2: Building Efficacy for Addressing Global Warming

While essential, tension alone is insufficient to motivate people to alter their thinking or behavior around global warming and in fact can actually produce the opposite effect of denial and disinterest. The second key to change is that people must believe that they personally, and society at large, have the know-how, skills and tools to address the problem and reduce the tension. Most Americans do not have a clear sense of how to tackle global warming or that the actions that they have been asked to support will work.

To motivate people to engage in activities that can reduce global warming, climate leaders must build people's sense of efficacy. Building efficacy involves communicating real-world examples of actions and policies that are successfully reducing carbon emissions. Climate leaders must also show how individuals can make a difference and that taking action will help people live according to their values.

Social Capital Project research and practitioner experience have helped identify five main reasons why the public does not have a sense of efficacy around global warming. Taking efforts to close these gaps in confidence is essential so that people who care about global warming do not become overwhelmed by the issue.

Five Challenges in Building Efficacy

1. The Kitchen Sink Environmentalism Challenge

“I believe we are all working on it: you with your recycling; me with not using pesticides; you with community planning. We are all doing something because that all affects global warming.”

When global warming become about everything, it becomes about nothing and people don't know what to think about it or what solutions to support. The issue becomes murky and falls into the general category of pollution, which is the default for all bad environmental impacts. If pollution is the problem, than the solution is to clean it up, rather than focusing on reducing carbon emissions. Concepts such as “clean coal” can sound appealing and lead to confusion about what should be done.

2. The Leaders Are Taking Care of It Challenge

“Surely lots of scientists and technical types, who can actually make a difference, are working on this issue.”

Even if people have accepted the enormity of the problem of global warming, it is often difficult to see what individuals can do to address it and even incongruous that they're being asked to deal with it. While many Americans do not trust in government to do the right thing, there is nonetheless a deeply held conviction that the government and other experts should be the ones acting to address threats of this scale. When the public do not perceive leaders to be acting, then it is an indication that the problem is not as serious or urgent to address as some say, or that solutions are just not available.

3. The Little Things Make a Difference Challenge

“I’m just a little person that does a little bit. If a lot of people did a little bit, then it would add up.”

Individual behavior change is a critical component of addressing global warming. Yet at the same time, if not done well, emphasizing changes in people’s daily lives can distract from the need for collective action through policy change and community efforts. People either think that they are doing their part by changing light bulbs and stop there or they feel that taking these steps are meaningless given the scale of the challenge. Making the connections between smaller actions and broader changes is critical as well as emphasizing the need for collective action.



4. The Perfection Challenge

“Even these compact fluorescent light bulbs that we’re using today that we’re saying are so wonderful, they have a certain amount of mercury in them. They have a certain amount of bad chemicals and the phosphors that allow the fluorescent lights to work.”

Americans who follow or are actively involved in environmental issues can become paralyzed by their knowledge and thus apt to criticize proposed solutions for not being green enough. While a certain amount of skepticism can be a good thing, it can also lead to a reluctance to embrace any solution that is not “perfect,” thus leaving them and everyone else stuck in the status quo.

5. The Environmental Overload Challenge

Green is now a buzzword being used by everyone to sell everything. The public is getting competing and sometimes conflicting information about the environment from business, government and nonprofits. Most don’t know whom to trust or how to sort out environmental claims. When it comes to prioritizing environmental issues, people may think that global warming is the most pressing issue but they are not sure.

As a result of this overload, people don’t want another list of the ten things that they can do to protect the environment or stop global warming. Most Americans care but are pressed for time and money. They want to know the one or two things they can do that will make the biggest difference.



Building a Sense of Efficacy

The challenge of global warming must be part of the narrative on global warming. However, the challenge needs to be matched with hope for a better life and explicit examples of successful actions that can be taken. Climate leaders must build confidence in the ability of people, organizations and the nation as a whole to reduce global warming and enhance their faith that new practices and policies will make a difference. They need to help the public visualize specific, tangible strides toward fixing the problem and map out concrete actions steps that can and need to be taken.

Four ways to build a sense of efficacy around our ability to address global warming

1. Connect Global Warming to Other Priority Issues

Connect global warming to concerns that people already have, rather than asking people to care about yet another issue,

tip

Provide people with a sense that there are actionable solutions to address global warming and clearly illustrate the roles individuals can play even when the “ask” includes policy change.

2. Avoid Pollution as a Leading Idea

While a familiar term, using pollution to describe the cause of global warming does not help people make the connection between carbon-based energy use and other causes of global warming. Other ideas, such as the role of “too much carbon,” should be established first.

tip

Refer to “the carbon pollution that causes global warming” which fills in the missing information that we are dealing with a problem of too much carbon in the atmosphere.

Talking Points:

- We have to connect the dots between our own lives and the climate that surrounds and supports our quality of life. And that starts by connecting the work each of us is already doing with the issue that links us all - global warming.
- Eating food grown locally cuts down on fossil fuels used for transportation and helps bring down our overall carbon emissions that create global warming. So whether you love gardening, cooking or eating, there is a lot that you can do every day that can make a difference.
- We all care about improving our communities, cities, states and nation. With smarter decisions about development, we can cut down on long-distance commutes, save fuel and cut the carbon emissions that surround the earth and trap in heat that leads to disruptions in the climate we rely upon. With enough pressure from citizens, we can bring carbon-free energy, such as solar and wind power, right here.

Talking Point:

- Carbon dioxide and other pollutants collect in the atmosphere like a thickening blanket, trapping the sun's heat and causing the planet to warm up.



Talking Point:

- We need to encourage more cities and states to adopt policies that limit suburban sprawl. Promoting “smart growth” will limit long commutes and dramatically reduce the use of carbon-based fuels that lead to global warming.

tip

Make the link between specific opportunities and how they will address global warming, such as putting in new electrical transmission lines. Highlight success stories by individuals, households, government, private companies, and nonprofits.

3. Focus on Solutions

Make solutions tangible rather than leaving them as an afterthought. While some solutions require particular framing strategies to be successful, there are several general communications practices that apply to all climate solutions.

tip

Illustrate how ideas help solve the problem by using simple explanations that help people make the connections.

CASE STUDY



“Ontario, California has on average over 320 days of sunshine and thousands upon thousands of square

feet of empty roof space. A missed opportunity? We thought so. With support and incentives provided by state, federal government and our electric utility we built a 400 kilowatt solar array the size of a football field at our distribution center. From 2007 to 2008 (our first full year), the solar array has cut our energy costs and emissions from our facility by 13%.” - *The Timberland Company, 2009 Report*

tip

Make the need for collective action apparent, and highlight the importance of citizen action in keeping government accountable.

tip

Lower the bar for “collective action” so that people can begin to get engaged and identify themselves with the issue.

Talking Point:

- We need to address global warming together. Driving less helps, but high fuel efficiency standards are even more important. Turning off the lights is a good thing to do, but we also need more carbon-free electricity sources, such as solar and wind power.

Talking Point:

- There is a lot that each of us can do to help, whether that means learning more about the issue, talking with others, changing our own energy use, or making sure that elected officials know how we feel.
- We already have effective, proven solutions to reduce our carbon load. We now need the political will and investments to bring them up to scale.

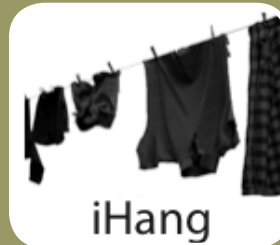
tip

Make it clear that government needs to play a proactive role, rather than waiting for the market or new technologies to solve the problems.

Talking Point:

- Business leaders are looking to government to set new standards and invest in carbon-free energy solutions.

CASE STUDY



Kids vs Global Warming is “a group of kids that educate other kids about the science of global warming and empower

them to take action.” Started by 14 year old Alec Loorz, the organization created a video, “iMatter: Story of Global Warming” that visually conveys the impacts of global warming and the ways in which young people can be part of the solution by participating in activities like hang drying clothes and planting a garden.

www.kids-vs-global-warming.com

4. Give the Audience a Clear Role in the Story

Are we asking people to change individual behavior, to engage in policy change, or both?

The best answer is that people need a mental picture both of the big-picture changes that are needed such as the adoption of new policies, and of their own role in making change happen. As communicators, we must help people to bridge between personal and collective action. The idea of “managing carbon,” for example, allows people to think both at a collective level and an individual level.

SPECIAL TOPIC: Building Public Support for Climate Policies

Many Americans will support the adoption of new climate policies if it is clear that the policy will really address global warming. While the term “regulation” is not a popular one, the public does support direct government actions, such as setting limits on pollution, requiring the use of carbon free energy sources and ensuring compliance. Market mechanisms, such as Cap and Trade, are a harder sell because they are not straightforward to many Americans and seem to leave more wiggle room for bad actors. More favorable fiscal policies include ones that encourage shifts in behavior such as subsidizing clean energy producers, giving incentives to buy efficient cars, and establishing tax breaks for renewable energy or efficiency measures. Discouraging measures, such as establishing pollution fees, increasing taxes on fossil fuel use, or requiring surcharges on energy, need to be tied to clear and cost effective solutions and incentives.



WHAT AMERICANS ARE SAYING:

“I think if something is not mandated, and unless it is so astronomical to pay for going over the limit, I don’t think businesses will -- I mean it’s been proven that businesses don’t change unless it costs them.”



When incentives and disincentives are tied together, people are more likely to support solutions.

Talking Points:

- To pay for this plan, we will encourage tradeoffs. We will increase taxes on the fossil fuel (oil and coal) use while cutting taxes on wind and solar energy; we will increase sales taxes on gas-guzzling cars while lowering sales taxes on fuel-efficient cars.
- We need a carrot and stick approach. Laws need to limit how much carbon companies emit. Those under their limit get incentives, while those who don’t pay.

Step 3: Building the Benefits of Addressing Global Warming

Theories of behavior change indicate that people need to directly experience or observe positive benefits when they make a fundamental shift and that those benefits need to far outweigh the perceived downsides.² This is true for individuals, organizations and society as well. The benefits of acting to address global warming are not clear to the majority of Americans and when they are, they are rarely connected to daily life. In fact, many Americans expect global warming will cause multiple negative outcomes.³

One of the reasons for the low belief in the benefits of addressing global warming is that public discourse has primarily focused on a long list of impacts. When benefits are mentioned in that context they are typically described as reduced impacts, such as preventing sea levels from exceeding dangerous levels. Yet, reducing a negative does not sound like a positive to most people. On the other hand, if we talk about increasing our ability to live safely near beautiful shorelines, to have greater protection from storm impacts, more access to sandy beaches, etc. then the public is more likely to become motivated to address the problem.

Three challenges in conveying the benefits of addressing global warming

I. The Energy Cost Challenge

Americans are used to hearing negative messages about the downsides of addressing global warming, from higher energy costs to restrictions on economic activity. Over the last several years, there has been progress made to incorporate discussions about the economic benefits of addressing global warming through the creation of a sustainable economy and green jobs. More work needs to be done, however, to convey these benefits in a way that resonates with the public and that overcomes concerns about rising costs related to energy use.

Saving money is often a benefit of engaging in higher energy efficiency and conservation practices and this motivates many people. For example, interest in the cost of energy use increases when fuel prices rise dramatically. This interest can lead to some structural changes (i.e. people sell their SUVs and buy smaller cars or replace their appliances with more efficient ones) that are difficult to reverse once the action has been taken. The challenge however, is that once prices go back many other “optional” activities such as riding the bus, can drop, as well as support for systemic change such as increased societal investment in new transportation infrastructure.

The public also has a healthy amount of skepticism around who will ultimately pay for an increased investment in clean and safe carbon-free energy sources. Concerns about being stuck with the bill for taking action on climate issues can block engagement even for those who express a great deal of concern.

² Doppelt, B. (2008). *The Power of Sustainable Thinking*. Earthscan

³ Maibach, E., Roser-Renouf, C. and Leiserowitz, A. *Global Warming's Six Americas: An Audience Segmentation Analysis* (2009) A global warming segmentation study conducted by the Yale Project on Climate Change and the George Mason University Center for Climate Change Communications.

2. The Identity Challenge

It is hard for most people to understand how global warming will impact their lives and even more difficult to see how working to address it could benefit them. Part of the reason for this is that most outreach campaigns fail to connect with people's identities and the type of benefits that are meaningful to them.



This failure is related to the fact that global warming is associated with environmentalists who are seen as either rich white urbanities or as extremists who are out of touch with the needs and interests of mainstream Americans. This environmental elitism is problematic because many people who care about global warming don't see themselves as the type of person who gets involved. Environmental actions are also often associated with pricey green consumer choices that most cannot afford.

Another component of the identity challenge is the tendency for people to view global warming through a partisan lens. Those who tend to deny or discount global warming are typically conservative Republicans, and they are likely to reject claims of benefits when they come from Democratic political leaders or liberals championing the issue.

3. Environmental Fatalism Challenge

Isn't it too late to address global warming? Why should I act when no one else is going to bother? If everything is so screwed up, I may as well get my piece of the pie while I can.

Fatalism comes in many forms but the bottom line is that you might care about global warming but if you don't think anything can be done to make things better, you are not likely to act.

Fatalism is particularly high among younger Americans who have little faith that anyone can address the issue, from government, business and civic leaders to scientists and academics. They do not see the benefit to engaging in civic life. Yet it is younger Americans who are going to have to deal with increasing climate impacts and who ultimately need to be engaged.



Conveying the Benefits of Action

To successfully engage the public in behavior change efforts, climate leaders must build the pros of addressing global warming and minimize the cons. The 2009 George Mason/Yale University's study of the U.S. public shows that Americans who feel that global warming is already or soon to impact their lives see more benefits to action than others and are most supportive of a range of climate policies.

This points to the fact that the benefits of addressing global warming should be directly experienced well illustrated through compelling stories or of those benefitting from change. It is important to focus on the benefits people are looking for such as more time with family and friends, an increased sense of security, access to clean and healthy living environments, etc.

Keep in mind that Americans are not always looking for economic or other quantifiable benefits from change. Benefits might come in the form of feeling a sense of purpose, being connected other people, and feeling part of something larger than the self. Asking people to make a significant contribution or even a sacrifice to address global warming can be very motivating in light of such an immense problem.

Here are two core concepts that can help add a sense of benefits to the global warming conversation:

1. Tie the need for carbon-free energy choices to the possibility of economic prosperity
2. Create a connection to people's identities, interests, and worldviews.

1. Tie Energy Choices to Economic Prosperity

While it is possible to overcome resistance to the cost concerns by emphasizing paying less now versus more later, using a more proactive economic prosperity frame is a better approach.

By tying global warming to energy choices and the economy, climate leaders can take advantage of the attention being focused on these high priority issues. It is important to keep global warming as a central part of the conversation, however, because short-term economic arguments and the long-term environmental case for action will not always coincide.

tip

Appeal to higher-level values about energy and economy. While most people want to save money, they are often as or more interested in American leadership and innovation, reducing our dependence on foreign oil, national security, and quality of life issues such as health and having more time to spend with friends and family.

tip

Provide concrete examples of the types of jobs and economic opportunities that will result. For example, subsidies for solar and wind energy installations will create more jobs producing these carbon-free energy sources. Tax credits to retrofit existing commercial buildings to be more energy efficient will create jobs in construction. Be clear on who will pay the bill and how consumers will be protected.



Talking Points:

- Dealing with global warming creates economic opportunity, and just as importantly, the chance to recover America's leadership role in the world.
- The United States has been a global leader in technological development, in scientific discovery and in curing disease. Addressing global warming provides an opportunity to build our economy while taking leadership in developing carbon-free energy.

2. Create a Connection to Identity

Even those who care deeply about the environment can view global warming as distant, disconnected to their lives and outside of their ability to influence. One of the most effective ways to motivate action is to point out how global warming relates to the beliefs and commitments that environmentally sympathetic Americans already possess, but don't recognize as related yet.

The good news is that because the issue touches everything in our lives, there is an opportunity to tie global warming to many personal concerns.



Connect the dots for the public by demonstrating how actions they are already taking fit in.

Talking Point:

- We all care about improving our communities, cities, states and nation. With smarter decisions about development, we can cut down on long-distance commutes, save fuel and cut the carbon emissions that are causing disruptions in the climate we rely upon. With enough pressure from citizens, we can bring carbon-free energy, such as solar and wind power right here. We need to take global warming into account as we make these decisions, but that takes each of us getting up and asking the tough questions.

Making global warming relevant to people's lives ultimately requires a deep understanding of what different segments of the public care about and where they are in the process of awareness and changing their behavior. This topic is discussed in detail in the next section of the guidebook.

In your communications and outreach efforts always remember to emphasize the three keys to change: creating tension about the need to address global warming; building the sense of efficacy that we have the know-how, skills and capacity to address the issue; and conveying the benefits of taking action. Emphasizing one element over another or ignoring one or more altogether is likely to fail.

SPECIAL TOPIC: Preparing for the Impacts of Climate Change

Talking about the need to prepare for climate impacts positions global warming as a real and current issue with impacts happening now and major consequences possible at any time. For those who think that we still don't know enough, a focus on the need to take "necessary precautions" can frame uncertainty as a reason to act, not delay. A preparation frame can also tap a desire for long-term planning rather than waiting for a crisis to occur.

At the same time, using "preparation" as a lead message can backfire for a number of reasons. It can undermine steps to prevent the worst effects of global warming by suggesting that we've either waited too long or that it is an issue that can wait.



WHAT AMERICANS ARE SAYING:

"I think you're looking at it too much like a fait accompli....I think people would rather work to prevent it."

"The problem is we have, for a lot of people, more pressing problems like whether they're going to have their house next week or not; whether they're going to be able to afford groceries or not."



Focus on the responsible management of risks and how acting now will mean fewer economic impacts and less instability later.

Continue emphasizing the importance of prevention, as well as preparation.

Talking Points:

- In addition to doing everything we can to prevent global warming, we need to prepare for the effects we are already beginning to experience. Just like a responsible homeowner wouldn't wait for a rainstorm to fix the hole in the roof, we can't wait for catastrophes to hit before we begin to act.
- We need national legislation that would require states and cities to assess their vulnerability to more intense hurricanes, water shortages, drought and wildfires, rising sea levels, and other events that are affecting the U.S. and its economy now and in the decades to come.

FRAMING IN PLAY



"Planning for climate change today is less expensive than rebuilding an entire network after the catastrophe...We cannot wait until after our infrastructure has been compromised to begin to plan for the effects of climate change now." said New York City Mayor Michael Bloomberg.

<http://www.observer.com/2009/adapting-climate-change-new-york-city>

FRAMING BEST PRACTICES

Here are a few general tips to keep in mind when building tension, efficacy and benefits into the global warming conversation.

- 1) Set the Terms of the Debate** — Be deliberate about the organizing concepts that shape your communications and apply them from the outset of your outreach efforts. When responding to other voices in the debate, avoid repeating contrary framing. The best bet is to immediately bridge from those arguments to the concepts that need to be conveyed.
- 2) Focus on the Big Picture** — Not every media opportunity should be acted upon. Take a long-term view of the understanding that needs to be built around global warming with core audiences over time. For example, avoid pointing to particular storms as evidence of global warming. If you do respond, focus on the larger shifts in our climate patterns that are leading to an increase in storms and storm intensity.
- 3) Fill in the Gaps** — Even highly educated and engaged Americans can be fuzzy about what global warming is and how it will impact them. While providing a detailed scientific explanation of global warming is not advised, it is important to clear up misperceptions and fill the gaps so people can see a clear picture of what is at stake and feel empowered to act. Connecting with people's emotions is critical, but it needs to go hand-in-hand with providing some of the basic facts.
- 4) Emphasize Solutions** — Providing evidence that solutions exist makes any problem easier to deal with, particularly a daunting issue such as global warming. In some cases, focusing on solutions can help people's reasoning about the issue as a whole. For example, talking about alternative ways to produce energy highlights the fact that power plants emit significant amounts of carbon.
- 5) Offer a New Insight** — When framing offers a new perspective that audiences don't feel like they have heard a million times before, they are more likely to pay attention. What is novel for the public, however, might be considered old news to experts. For example, many Americans are surprised to learn that most electricity is generated by burning coal, and that extracting and using coal creates negative impacts for communities, the economy, and the environment.
- 6) Translate Unfamiliar Terms** — Common sense terms are appealing. Drilling for more oil, producing clean coal or letting the market drive technological innovation sound straightforward and practical. Frames that describe global warming and actions that need to be taken must be able to compete.
- 7) Don't Use Murky References** — Historical references, such as the Manhattan Project, may be a great analogy for the type of technological innovation necessary to address global warming, but they don't resonate with most Americans. Technical terms, such as "carbon sequestration" are unfamiliar and difficult to distinguish from other approaches. Similarly, analogies, such as the "greenhouse effect" do not convey anything meaningful to people about global warming. Trapping heat inside a greenhouse to grow food sounds like a good thing to many people while others lack a basic understanding of how a greenhouse works.
- 8) Pay Attention to the Audience** — There is no general public. People process information in a variety of ways. The decision to act is based on a number of factors including where people are at in the behavior change process, as well as their social values and worldviews. Failing to recognize these differences can mean outreach and framing efforts miss their mark with everyone.

PART TWO: Understanding and Connecting with Audiences



In section one, we outlined key components of narratives around global warming that have the potential to build tension, a sense of efficacy and convey the benefits of acting to address climate issues. Conveying concepts that can build awareness and concern is critical; the challenge is how best to do it given there is no such thing as the general public. Americans understand and relate to issues such as global warming in a variety of ways based on their social values and where they are at in the behavior change process.

As a result, many public engagement efforts around climate issues fail because they do not take these core differences into consideration. For example, offering incentives to choose clean energy are useless if the audience is at an early stage in the cognitive and behavior change process and has not yet decided to pay attention to their energy consumption patterns. Alternatively, framing global warming as an environmental concern can be alienating for Americans with traditional and religious social values because their worldview tends to discount environmentalism as overly liberal and anti-authoritarian.

Many Americans are caught in the middle of the process of cognitive and behavior change on global warming. They accept that it is real yet have not yet decided if it matters enough to them to do something about it. By understanding the mechanisms that can move people through the stages of change to higher levels of engagement and by framing issues in a way that taps core social values, it is possible to design policies and programs that resonate with a range of key constituencies, including those not yet committed to change.

TAILORING STRATEGIES TO AUDIENCES' STAGES OF CHANGE

In *The Power of Sustainable Thinking*, Bob Doppelt summarizes behavior change theories from multiple fields into a concise framework that allows climate and sustainability leaders to easily assess where audiences are at in the change process and how to tailor outreach accordingly.

The **5D Staged Approach to Change** illustrates how cognitive and experiential change methods are most effective when people are at the early stages in a change process, while behavioral change mechanisms work for people further along. At each stage of change, supportive relationships can make all the difference, whether help is coming from friends, family members, peer groups, or professional networks, particularly given that change is a dynamic process and people regularly slip backward in the change process and need support and encouragement to continue forward.

When it comes to global warming, one way to think about the process individuals and organizations typically go through when making a change in thinking and behavior is the following:

- **Disinterest** – The “I won’t change” stage. People and organizations stuck in disinterest refuse to accept global warming as real or that it will have serious consequences and reject or even oppose calls to action. This is due to fear, inertia, or comfort with the current state of affairs. They may be acting rebellious or are rationalizing their actions. To move to the next stage of change, people must be opened to the possibility that their current thinking or behaviors are not benefitting them.
- **Deliberation** – The “I might change” stage. Individuals and organizations at the deliberation stage are just beginning to pay attention to global warming but they have not yet determined how it impacts their lives or if they should respond. As a result, they are not yet ready to change and can easily slip back to disinterest. To move to the next stage, the decision needs to be made that the benefits of taking action are substantially greater than the downsides. This involves assessing whether one has the physical, intellectual, and financial capacity to change and can be difficult if action is met with disapproval from peers.
- **Design** – The “I will change” stage. People accept that global warming needs to be dealt with and begin to create a plan to act individually or at the organizational and political levels. These actions are assessed in terms of how they would look and feel. For example, an individual at the design stage may research alternatives to their gas guzzling car, but if they can’t imagine themselves driving a smaller vehicle, they might slip back to the earlier stages of change. Moving to the fourth stage of change happens when the options seem viable and beneficial. And once actions plans have been created, making a public commitment to implement them helps ensure there is follow through.
- **Doing** – The “I am changing” stage. Action plans are now being executed through tangible steps that reduce carbon emissions, such as weatherizing homes or supporting climate policies. This is a difficult stage as old patterns and behaviors are being broken. Reinforcement and rewards are needed to avoid slipping backwards in the change process. On the other hand, if steps are successfully taken and people are benefiting and being rewarded, this can create momentum for further changes in thinking and behavior.
- **Defending** – The “I have changed” stage. People and organizations begin to integrate their new thinking and behaviors into daily life, typically six months to a year after initial steps have been taken. Action plans have been implemented and those at the defending stage are looking for new ways to apply their approach. Given how the economy is structured and the lack of social support for engaging in activities to address global warming, this is a difficult phase. Continuing peer support and rewards are needed, yet at the same time, it can also be exhilarating because all sorts of new opportunities become apparent.

Communications, policy tools, and other change mechanisms can benefit from being designed to address the internal issues people and organizations are grappling with in each of the phases in the 5-D Staged Approach. For example, Americans who are at later stages of change – Doing and Defending – are already working to reduce their carbon emissions. They don't need more facts about the impacts of global warming. Instead, they need information and tools on how to overcome obstacles they face when trying to address the problem. They are therefore more likely to respond positively to financial incentives, public acknowledgement, and meeting and talking with people who have met similar challenges.

On the other hand, people and organizations at the early stages of change – Disinterest, Deliberation and Design – are not ready to act. Incentive programs or political appeals, consequently, often fall flat. Instead, an effort needs to be made to increase tension by providing basic information about the relevance of global warming to increase efficacy by giving concrete examples of success and building benefits of taking action.

Reaching People at the Early Stages of Change

—Disinterest to Deliberation

When it comes to global warming, surveys show that as much as 50 percent of Americans are stuck in the disinterested or deliberation stages of change.⁴ It is possible to move some of these Americans to the design stage, but it is difficult and will take a lot of time and energy to motivate higher levels of engagement. Climate leaders must assess whether the investment is worth the effort. However, those at the earliest stages of change cannot be completely discounted because they represent large numbers of the public and in particular, American youth who will be facing the impacts of global warming for some time. Furthermore, a percentage of these people are very vocal in their opposition to global warming actions and policies and have considerable potential to stall or derail solutions. For change to happen, those at the early stages of change must drop their defenses. This is more likely to happen if the following change mechanisms are utilized at the right time and in effective ways.

DISTURBANCES

Disturbances in our lives are often needed to trigger the reframing process that can move people out of the disinterested phase of change on global warming. Major shocks, such as losing a job or significant milestones can change how we look at things. Pressure from others is one of the most common forms of disturbance and often requires some soul searching to respond.

An extreme spike in gas prices might influence those with limited budgets to take the bus or sell their SUV. While selling an SUV is a structural change likely to stick, it is harder to rely on disturbances such as energy costs to have a lasting impact given their fluctuations.

It is also tempting to take advantage of extreme storms to build awareness of global warming. This approach has its benefits in that it makes changes in our climate tangible to the public. On the other hand, it is difficult to credibly tie the issue to any single storm. If taking this approach, it is

⁴ Maibach, E., Roser-Renouf, C. and Leiserowitz, A. *Global Warming's Six Americas: An Audience Segmentation Analysis* (2009) A global warming segmentation study conducted by the Yale Project on Climate Change and the George Mason University Center for Climate Change Communications.

critical to make the connection to shifts in weather patterns and the likelihood we will have more uncertain and extreme weather. It is also critical to be sensitive to the people impacted by the storms rather than focusing on the technical dimensions of the issue (flood levels, challenges with levies, etc.)

Ultimately, disturbances that reflect a disconnection between people's values and their current reality create the most lasting impressions. For example, even Americans who deny the reality of global warming, can still be motivated to change given their belief in energy independence and self-reliance.

tip

Develop a peer-based outreach program by partnering with leaders from a range of sectors who are credible and compelling with target audiences. Partner with leaders from a range of sectors and interest groups who are compelling and credible climate spokespersons with segments being targeted to develop a peer-based outreach program.

FRAMING IN PLAY

“In most places, weather can change from minute-to-minute, hour-to-hour, day-to-day, and season-to-season. Climate, however, is the average of weather over time and space.” - NASA

BUILDING AWARENESS

Information alone does not typically motivate people to make a fundamental change in thinking or behavior. For example, there is ample information available on the link between smoking and cancer, but that doesn't stop many people from smoking. However, when information is packaged with other change mechanisms, such as the use of disturbances, it can be helpful in opening people to the idea of thinking differently.

Awareness campaigns should keep in mind the need to always emphasize the three keys to change – tension, efficacy, and benefits – and must be framed in ways that resonate with target audiences. (See the next section on audience segmentation.)

tip

Illustrate how the benefits of taking action connect to peoples' lives. Depending on the audience, focus on benefits such as making America more secure by reducing our dependence on foreign oil or the benefits of spending less time stuck in traffic thanks to increased investments in public transit.

CHOICE EXPANSION

Global warming can seem like an issue far too complicated to tackle. For those in the early stages of change, large goals such as an 80% cut in carbon emissions seem overwhelming. An effective change mechanism is to break down large goals into bite-sized, measurable steps individuals, organizations, or society as a whole can take. This increases a sense of efficacy and motivates action.

- tip** Choice expansion doesn't mean overwhelming people with endless lists of what they can do. Try focusing on simple, straight-forward action items that can be taken initially, then build up to action with higher carbon-reduction potential.
- tip** Provide clear guidance on what will be achieved in terms of benefits (cost savings, status, reaction of social networks) if an action is taken.

FRAMING IN PLAY



The Turn It Off Campaign in Toronto, Ontario is an example of a successful global warming behavior change program. The pilot project was aimed at reducing the amount and frequency of time motorists spend idling and in doing so, it helped people make the link between personal actions and global warming.

Motorists at Toronto schools and Toronto Transit Commission "Kiss and Ride" parking lots were approached by project staff who spoke with them about the importance of turning off their vehicle engine when parked. These motorists were given an information card about the environmental and cost impacts of idling and were asked to make a commitment to stop.

Most people who made the commitment were willing to place an anti-idling sticker in their windshield.

The sticker acted as a reminder to the driver, but was also visible on the outside of the car and helped to create a social norm around this new behavior. The campaign was reinforced by adding anti-idling signs in the parking lots. The combination of information, commitment and reminders reduced idling at the test locations by 32% and idling duration by 73%. As importantly, it created a foundation of engagement with Toronto motorists that can be built upon for additional behavior change efforts.

SUPPORTIVE RELATIONSHIPS

For most of us, a fundamental change of any type is difficult. At the early stages of change, it is important to have people we trust to share our angst, help illustrate the benefits of taking action steps, and provide advice on how those steps can be taken. Because of our defense mechanisms, we tend to overemphasize the downsides to making a change. Supportive relationships can provide feedback on how we are resisting new ways of thinking.



Create opportunities for people to connect and work with others who are thinking about engaging in activities to address global warming, through house parties, film screenings, or speaker series.



Ensure support is coming from people whom those at the early stages of change trust. This may include local business or civic leaders, clergy, etc. rather than environmental leaders.

Americans in the Middle

—Deliberation to Design

Once people have decided that the advantages of engagement in activities to address global warming far outweigh the downsides, they are ready to move to the design stage of change. Yet Americans in the middle stages of change, despite their concern, are often overwhelmed and unclear on what steps to take. As a result, they are often overlooked by outreach campaigns that either emphasize basic information about global warming or focus on high-level actions best suited to the later stages of change (i.e. purchasing solar hot water heaters or engaging politically).

For those deliberating and starting to design for change, there is still a need for awareness building, choice expansion and supportive relationships but at the middle stages mechanisms such as emotional inspirational, self-appraisal and commitment can be incorporated into outreach strategies as well.

EMOTIONAL INSPIRATION

Having information about the risks of inaction and the options and benefits of acting to address global warming is critical. However, the decision to engage and move to either the deliberation or design stages of change is often an emotional one. Both negative emotions associated with an awareness of how we personally, our organizations, or our society are contributing to global warming as well as positive emotions generated by seeing opportunities to address the issue are important. Both types of emotions can be tapped as long as they are in balance to one another.



Spotlight examples of how communities, organizations, or individuals are impacted by and successfully addressing global warming. Focus on their motivations for getting involved and the rewards they received for taking action.



For many Americans, emotional inspiration is likely to come from religious leaders or fellow community members taking action who share their sense of duty and responsibility to future generations.



Choose which emotions to tap carefully as some emotions are more motivating than others. For example, anger tends to inspire action more than fear.

SELF-EVALUATION

Deep-seated personal or organizational self-assessments are often at the heart of the deliberation about whether or not to make a fundamental change. People and groups must ultimately decide whether they are happy with the current state of affairs and able to live out their values. They are often frightened about change because they are unclear what they would need to give up to engage in activities to address global warming. Climate leaders should develop and use straightforward tools to help people through the self-evaluation process and to determine the upsides of action.



Quantify carbon emissions and sources. Include clear and accessible alternatives to climate-damaging behaviors.



Develop a list of the advantages of current activities that generate carbon emissions and the disadvantages associated with shifting to lower emission options (i.e. driving versus taking the bus or cycling.) Determine which disadvantages are permanent and which are temporary so the downsides and benefits of action are clearly illustrated.

COMMITMENT

Individuals and organizations move out of design into the doing stage of change only after they make a public commitment to engage in activities to address global warming. This is energizing because when commitments are out in the open, peers can provide support and accountability. Setting specific milestones and due dates can also help ensure that specific steps are taken.



Reward early efforts and actors with public praise, business referrals, etc.



Be realistic about what can be accomplished but don't be afraid to make commitments that can't yet be kept. It is an incremental process.

CASE STUDY



Former Seattle Mayor Greg Nickels

More than 600 U.S. mayors have signed a cooperative agreement pledging to reduce their cities' carbon reductions. This pledge provides an interesting example of a number of important behavior change and framing mechanisms. First, by taking a public pledge, these U.S. mayors reinforce each other's commitment and leadership position on climate issues. They are also clearly signalling to their constituencies the need for action now, rather than waiting for technology to save us or for national or global agreements to take effect. The Mayors Climate Protection Agreement offers a sense of hope by including a list of 12 key actions that can be taken locally to address global warming and improve people's lives. Finally, through the U.S. Conference of Mayors, municipal climate leaders are learning from each other by sharing best practices in carbon reduction efforts.

The Action Stages of Change

—Doing and Defending

Once people or organizations enter the later stages of change, basic information campaigns are not sufficient to motivate and enhance efforts to address global warming. Those willing to take action need tools and information to help them implement their action plans, as well as constant positive reinforcement and rewards to keep spirits high and overcome obstacles. Otherwise, even when at the final stage of change, it is possible to backtrack in the process.

SUBSTITUTION

Substitution involves identifying factors that elicit unsustainable behaviors and replacing them with factors that foster more sustainable choices. Substitution also means making reasonable alternatives available that are simple and affordable, or else damaging behaviors that undermine climate will continue and negative frames around environmental elitism will be reinforced.

- tip** Focus on a handful of actions that people can realistically take that will have a high carbon-reduction return.
- tip** Provide regular feedback on the outcomes of substitution efforts. People want to know how their actions are influencing an issue.
- tip** Don't try everything at once. Start with substituting behaviors that are relatively easy and move to activities involving a higher level of commitment.

STRUCTURAL CHANGE

Once the decision has been made to change, it is important to redesign the larger environment to support and reinforce new ways of thinking. Structural change is about creating something new and more sustainable versus problem solving that seeks to fix flaws within existing unsustainable approaches.

Some structural changes are technical in nature, such as installing a programmable thermostat, and others involve redesigning social structures. The later in particular requires the endorsement and continued support from others. At the same time, when pushing for structural change it is often helpful to begin sharing with others what has been learned to date. Teaching is one of the best ways to learn a subject and can provide ongoing reinforcements.

- tip** Create concrete structural change action plans. How can office policies or building codes be changed? What can be done to increase investments in energy efficiency as well as turning down the thermometer and remembering to turn off lights?
- tip** Don't try to change everything at once. Start small and build over time to more demanding structural changes.

CASE STUDY



As a response to global warming, Bank of America constructed the first LEED platinum-certified highrise. This is the highest honors from LEED, an international third-party green building certification program. The Bank of America Tower is the second-tallest building in Manhattan yet it consumes half of the energy and water of less impressive highrises. With recycled, reused, and sustainable building materials and a filtered air system, the building is considered a healthy and inspiring place to work. The tower saves money and carbon, and provides an example of possibility.

http://www.youtube.com/watch?v=ThIA_kh53zs&feature=related

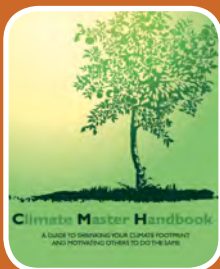
REINFORCEMENT

It is important to recognize and reward accomplishments that have been made. Rewards can be verbal, financial or status-related and they also can be given to yourself, such as taking the money saved by biking to work and using it on a dinner out, massage, concert, etc.

tip Set up award and recognition ceremonies for individuals and organizations that are actively engaging in activities to address global warming.

tip Establish networks where people can meet regularly to discuss action plans and best practices.

CASE STUDY



The Climate Leadership Initiative's Climate Master programs provide action-oriented education and training to help individuals, businesses, and youth reduce greenhouse gas emissions and prepare for local climate impacts. The programs motivate behavior change amongst participants who learn to view their day-to-day decisions through a "climate filter." Participants attend thirty hours of training and volunteer to teach other community members at local events or through private consultations.

The program also offers a train-the-trainer workshop to encourage and support the continuation of the program across the country.

TARGETING AUDIENCES AND UNDERSTANDING THEIR VALUES

Part of the trick in creating a sufficient sense of tension, efficacy and benefits in the global warming conversation is to tap people’s deeply held values. The Social Capital Project created *The Ecological Roadmap* which is one of the largest studies on American environmental attitudes and worldviews. The *Roadmap* segments the public into ten distinct groups based on how they rank more than 130 social values. These social values are better indicators than demographics when it comes to influencing people’s engagement in environmental issues.

The *Roadmap* illustrates that the “public” is not all the same. As a result, a critical aspect of developing effective public engagement campaigns is to target audience segments and develop outreach and behavior change approaches that tap into the values those segments hold. For example, concern for the environment is increasing within a handful of segments of the public. Yet what often appeals to these environmentally-minded segments can be alienating for others, even for people who may have a connection to the outdoors but who do not identify with the image of environmentalists.

While project budgets may not allow for a refined segmentation approach, it is still important to keep a limited number of audiences in mind when developing outreach campaigns and to avoid framing issues in ways that inadvertently creates opposition to climate policies and programs.

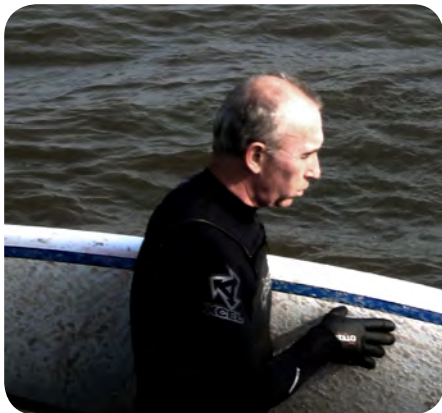
SEGMENT	U.S.%	WORLDVIEW ON THE ENVIRONMENT
Greenest Americans	9%	Everything is connected, and our daily actions have an impact on the environment.
Idealists	3%	Green lifestyles are part of a new way of being.
Caretakers	24%	Healthy families need a healthy environment.
Traditionalists	20%	Religion and morality dictate actions in a world where humans are superior to nature.
Driven Independents	7%	Protecting the earth is fine as long as it doesn’t get in the way of success.
Murky Middles	17%	Indifferent to most everything, including the environment.
Fatalists	5%	Getting material and status needs met on a daily basis trumps worries about the planet.
Materialists	7%	Little can be done to protect the environment, so why not get a piece of the pie.
Cruel Worlders	6%	Resentment and isolation leave no room for environmental concerns.
UnGreens	3%	Environmental degradation and pollution are inevitable parts of America’s prosperity.

GREENEST AMERICANS

The Greenest Americans are the most concerned about global warming, the most politically engaged and are most supportive of environmental organizations. These affluent, highly educated Americans can often afford to make green consumer choices, such as environmentally friendly home renovations. Given that most Greenest Americans can be found in the later stages of change, it is possible to engage this group in the political process as well as provide incentives for this group to move to more carbon-neutral lifestyles.



The Greenest Americans are the most informed about environmental issues. Yet even they need to be guided when it comes to determining the most effective ways to address global warming. Create tools that help these eager Americans measure and reduce their carbon footprint such as consumer guides and carbon calculators. Ask the civically-minded Greenest Americans to help engage their neighbors, families and friends.



Sample framing:

We know you do your part. You recycle, save energy, try to drive less. Now global warming is calling us to do more. It impacts every other environmental issue and touches so many other concerns. We have a responsibility in the United States to act as a leader by creating new laws that limit carbon and other greenhouse gas emissions and by investing in clean energy technologies. At the same time, we must not forget that there are things we can do in our daily lives that can reduce carbon.

→ 68% rank global warming as one of the most important issues

- 9% of adults
- 35% make \$100k+
- 49% have post grad degree
- 25% are 65+ years of age
- 89% Caucasian
- 93% very likely to vote

Values to Tap

Ecological Concern
Comfort with Ambiguity
Civic Engagement
Global Consciousness

Values to Avoid

American Entitlement
Confidence in Big Business

IDEALISTS

Younger and less political than the Greenest Americans, the Idealists express the second-highest level of concern about global warming. Though they only represent three percent of the public, members of this segment have the potential to be an influential three percent. The Idealists look to technology for solutions and are interested in investments being made in carbon-free energy sources. Keep in mind that while the majority of the Idealists may be in the later stages of change when it comes to awareness and taking individual action steps, such as converting their cars to run on biodiesel, they are not politically engaged.



The Idealists are low on the value “trust.” They need to see the proof for themselves that progress is being made. Connect individual acts to the need for systemic change and illustrate the benefits of political engagement. Tap into their anti-authoritarian values by revealing who stands to win and lose from inaction on climate issues. Given that they are focused on creativity and self-expression, ask Idealists to play a role in outreach, particularly in helping climate messages to go viral through their social networks.



Sample framing:

Global warming is a big deal. To address it, we need the government and businesses to invest heavily in new clean energy technologies. But let's face it, that's not going to happen until the powers that be feel the squeeze on their bottom lines. Be part of creating the new energy reality. Stop supporting corporate oil. Ride your bike, run your car on veggie oil. Raise your voice with decision makers and inspire your friends to do the same.

→ 51% rank global warming as one of the most important issues

- 3% of adults
- 34% make >\$100k
- 44% between 25-44 years of age
- 29% are students
- 73% Caucasian
- 53% very likely to vote

Values to Tap

Enthusiasm for New Technology
Rejection of Authority
American Dream

Values to Avoid

Duty
Saving on Principle
Importance of Discipline

FRAMING IN PLAY



In October 2009, the 350 Campaign mobilized more than one million people in countries across the world to engage in a global day of action on climate issues by creating emotional inspiration for those ready to act. Using social media and grassroots organizing approaches, the 350 Campaign connected willing citizens to one another for peer support and to give people a taste of collective action and that their own small efforts at a local level are part of something larger and powerful. <http://www.350.org/media>

CARETAKERS

The Caretakers are the largest segment in the *Roadmap*, representing almost a quarter of the public. While they hold strong ecological values, they are not ideological in their approach and generally like to avoid conflict. Nurturing and family-focused, these community-minded Americans place great importance on local issues such as children's health and access to clean parks and play areas. Caretakers do think about global warming, but they are more concerned about other issues such as gas prices and rising energy costs.



Responsibility, common sense and everyday ethics should drive global warming framing approaches for the Caretakers who need to see how global warming is connected to things they are already concerned by such as their children's well-being. The idea of stewardship appeals to the Caretakers who want to see problems solved and will support local action on global warming if there is a clear economic benefit or possibility for job creation. Socially connected, members of this segment are likely to take steps to address global warming that are supported by their church and community groups.



Sample framing:

It is important to take care of the environment so that our kids and grandkids can have the freedom to play outside and to fish and camp like we had when we were young. The issue of global warming can feel overwhelming and it's hard to have the time and money to make a difference. But, there are things that everyone one can do, right at home or in their community, that can also save money and save you heartburn every time gas and energy prices rise.

→ 44% rank global warming as one of the most important issues

- 24% of adults
- 26% African-American
- 18% Hispanic/Latino
- 60% make <\$75k
- 70% very likely to vote

Values to Tap

Group Egalitarianism
American Liberty
Ecological Concern

Values to Avoid

American Entitlement
Unfettered Individualism

FRAMING IN PLAY

To reach Americans who have a religious worldview, spiritual leaders are often the best messengers. Earth Ministries in Seattle has developed a Resources for a Carbon-Free Lent climate education and behavior change program to assist churches in engaging their congregations in addressing global warming. The guide provides tips on how to frame global warming within a interfaith Christian worldview and offers action items for each day of Lent. The guide includes the following statement from Presbyterian USA:

“Global Warming is likely to increase hunger. It will hit the poor hardest. Climate change (or global warming) is already affecting and will dramatically impact food production patterns...We are called as Christians to love our neighbors and how we, individually and corporately, react to climate change and our own role in causing global warming demonstrates this witness to God. While the link may not appear obvious at first, reducing our energy use, particularly our use of fossil fuels, is one way of demonstrating our love for our neighbors.” <http://earthministry.org/programs/waip/waip-lenten-prayer-reflection-guide>

TRADITIONALISTS

The second-largest segment of the public are the Traditionalists who tend to be found in the earlier stages of change. They do not place importance on global warming in part because they do not see how it will impact people. Traditionalists are very religious and are not certain whether global warming is caused by humans, natural causes, or both; members of this older, conservative and rural segment are much more concerned about gas and energy costs.



Avoid a focus on the causes of global warming and shift the discussion to our responsibility to protect god’s creation, our responsibility to future generations, and the need to reduce the risks associated with climate impacts. Tap into their interest in rural economic development by filling in the picture of how investments in clean, carbon-free energy sources can protect the quality of life and unique character of rural communities. Messages will have particular resonance when delivered by respected authority figures, such as a minister or successful business leader.



Sample framing:

You may have been hearing more talk about global warming but are unsure if there is anything we can do about it. Regardless of the cause, being responsible stewards means ensuring that our children have the opportunity to enjoy the high quality of life we enjoy. Global warming threatens that way of life, particularly in communities where the economy is dependent on a stable climate for growing food, harvesting timber, and providing recreational and tourism opportunities. Investing in clean energy can bring economic development to communities that need it without destroying our way of life.

➔ 22% rank global warming as one of the most important issues

- 20% of adults
- 81% Caucasian
- 67% Conservative Protestants
- 55% live in a rural location or small town

Values to Tap

Duty
National Pride
Liberal
Communitarianism
Altruism

Values to Avoid

Excessive Taxation
Apocalypse
Humans Superior to
Animals

FRAMING IN PLAY

When it comes to reaching older, conservative segments of the public, choosing the right messenger is often the key to success. National security experts, for example, are far more likely than environmental voices to resonate with Traditionalists. The Center for Naval Analyses’ Military Advisory Board on National Security and the Threat of Climate Change involves leading military and security experts in research and outreach and provide a compelling perspective in the global warming conversation. Here is what General Anthony Zinni, USMC (ret.) and former Chief of U.S. Forces in the Middle East says about global warming:

“There may be some debate as to degree and affect. But the point is if you just write off the science, if you don’t accept what seems to me to be the majority view, then you are saying you are going to roll the dice and take a chance. And I think if you look at the potential outcomes of that, we would see that for our children and our grandchildren, that that could be a disaster. They will look back and say you should have seen this. You should have taken the prudent course of action and prepared for this. You should have taken the actions to lessen the impact.”

DRIVEN INDEPENDENTS

Most of the status-seeking Driven Independents are still predominantly stuck in the deliberation stage of change because they are cynical that our dog-eat-dog society will not significantly address global warming. Financially successful, this segment skews more male than any other; global warming will become of interest to them when they see a way they can personally benefit, such as making money. Their environmental values are neutral – Driven Independents don't really take a position but they are also not likely to oppose those who do as long as they don't stand in the way of their path to success.



Driven Independents believe that they are deserving of a healthy lifestyle, beautiful places to recreate in, and financial benefits of a prosperous green economy and they are dissatisfied when they don't always get what they think they deserve. Help direct this group by tapping into their enthusiasm for new technologies and motivating them to support investments in clean energy or to deck out their home with the latest in eco-living and energy-efficient technologies.



Sample framing:

We need to invest in clean energy technologies that can help address global warming and that provide opportunities to make money and save money at the same time. Business has a role to play in driving this innovation and creating opportunities for Americans to benefit from being a global leader. We can't let China, India and others get ahead and cause the U.S. to miss out on this chance for prosperity.

➔ 29% rank global warming as one of the most important issues

- 7% of adults
- 65% male
- 39% college degree
- 45% live in the suburbs
- 61% very likely to vote

Values to Tap

Saving on Principle
Openness to
Change
Enthusiasm for New
Technology

Values to Avoid

Rejection of
Authority
Government as
Economic Equalizer
Liberal
Communitarianism

MURKY MIDDLES

Average in many ways – income, education, age, diversity – these Americans show moderate concern about global warming which is consistent with the fact they do not hold strong views on most issues. The third-largest segment of the public, the Murky Middles tend to follow trends, not start them and they won't engage in behavior change until they see others doing it too. Given their focus on getting ahead, it is not surprising that their worries about energy and gas prices trump their concern about global warming.

tip

Because they are at the early stages of change, the case for paying attention to global warming still needs to be made for the Murky Middles to become engaged. Information campaigns aimed at members of this segment should focus on mainstream values such as freedom and responsibility. Murky Middles strongly believe in the American dream so it is important to expand that dream to include the role of innovation and leadership in shifting to a low-carbon energy economy.



Sample framing:

These days, it can take every ounce of energy to get ahead; we are all working harder and for less return. There are simple things we can all do to get America back on track, such as saving energy at home. We can save money and create jobs by making our buildings and cars run on less energy. It just makes sense.

➔ 34% rank global warming as one of the most important issues

- 17% of adults
- 67% make <\$75k
- 40% identify as Independents

Values to Tap

Equal Relationship with Youth
Openness to Change

Values to Avoid

Aversion to Complexity
Enthusiasm for New Technology
Duty

FATALISTS

The Fatalists tend to be young, culturally diverse and urban. They express one of the highest levels of concern about global warming yet their strong sense of hopelessness and disempowerment prevents them from seeing what can be done to address it or what role they might play. Due to their low socio-economic status, the Fatalists are more concerned about gas and energy prices than any other segment of the public.



To reach the Fatalists, climate leaders must illustrate that change is possible and that there will be direct benefits to getting involved. Saying it is not enough. The possibility of change must be experienced. Given that they are closely tied to their family and community culture, Fatalists see issues through a cultural lens, which means that emphasizing what addressing global warming means to local communities is a must.



Sample framing:

Global warming is already starting to impact our communities. It feels like such a huge issue and can be confusing to sort out in terms of what can be done. But there are already places across the country where business, government, and people have come together and taken tried and true steps that save energy and reduce our reliance on foreign oil. This is helping to make America a safer place and the air a little easier to breathe.

➔ **46% rank global warming as one of the most important issues**

- 5% of adults
- 32% African American and 21% Hispanic/Latino
- 30% between 15-24 years of age
- 23% are students
- 65% <\$50k
- 37% live in a central city area

Values to Tap	Values to Avoid
Active Government	Ecological Fatalism
Saving on Principle	Openness to Change
Importance of National Security	Liberal Communitarianism

FRAMING IN PLAY



Markese Bryant (aka Doo-Dat) produced “The Dream Reborn (My President is Green)” a compelling video that ties global warming to economic development and improving the quality of life for inner city residents. The video inspired The Dream Reborn Video Contest by the organization Green For All, which successfully frames global warming and leverage new media and social networking in a way that resonates with younger Americans.

<http://contestvote.greenforall.org/videos/green-anthem>

MATERIALISTS

The Materialists are young, urban and multicultural. They often feel socially isolated and directionless. They are largely focused on themselves and living in the moment and as a result, they are among the least concerned Americans about global warming. Yet even the majority of the Materialists agree that the issue matters to some extent and this belief needs to be cultivated given that they will face increasing impacts of global warming over their lifetime.

tip

It will be a challenge to engage the Materialists given how uninterested they are in following the news, let alone voting. At the same time, the Materialists do have things in common with the Greenest Americans such as their willingness to reject the status quo and their comfort with ambiguity. Campaigns that use an anti-authoritarian tone could resonate. Given their focus on image and thrill-seeking, members of this segment might be persuaded by climate-friendly celebrities or may tune into intense, experiential outreach efforts.



Sample framing:

Okay, let's get real. You may be too busy to sit around and worry about global warming. And you might not think anything can be done about it in this world where everyone is just out for themselves. Yet being cynical doesn't mean you can't care. And while businesses and the government need to step in to make sure we have a future, it's your time to make a difference too. Get involved. Get noticed.

→ 25% rank global warming as one of the most important issues

- 7% of adults
- 36% between 15-24 years of age
- 22% are students
- 43% likely to vote

Values to Tap

Pursuit of Intensity
Confidence in Big Business
Need for Status
Recognition
Active Government

Values to Avoid

Religiosity
Ecological Fatalism
Civic Engagement

CRUEL WORLDERS

The Cruel Worlders are resentful that they have been left out of the American dream. Largely older, white, and urban members of this lower-income, disempowered segment tend to blame others for their challenges. Negative about many things in life, these hard-edged Americans accept that global warming will have an impact on our lives but they are still at the early stages of change because they have one of the lowest levels of confidence that anything can be done to address it.



The Cruel Worlders are not a priority segment to target for outreach. Their concerns, however, should be taken into consideration so they do not inadvertently become opponents to climate action when, for example, designing programs that protect consumers from paying the price associated with shifting to new energy sources. They might also be persuaded by green job development programs, particularly if they or their family and friends directly experience the benefits by having a green job that increases their socio-economic status.



Sample framing:

America knows how to face tough challenges. We have faced them before and have had the creativity and resiliency to prevail. Our entrepreneurial spirit will help us stay ahead of the pack when it comes to finding new energy sources that we can use to power our lives and save money. Global warming is already impacting the American way of life.

➔ 29% rank global warming as one of the most important issues

- 6% of adults
- 26% make <\$30k
- 85% Caucasian
- 38% work in semi- to unskilled trade

Values to Tap

Entrepreneurialism
American Entitlement
Tried and True

Values to Avoid

Aversion to Complexity
Technology Anxiety
Every Man for Himself

UNGREENS

The vast majority of the UnGreens do not consider global warming to be an important issue. More than any other group, this conservative segment believes global warming is occurring due to natural causes and thinks there is nothing that can be done. This is consistent with their anti-environmental attitudes and fatalism. While they enjoy spending time outdoors, they reject the notion of environmentalism and environmentalists because of the political ideology associated with those concepts.



Interestingly enough, while many UnGreens actively deny that global warming is real, some of them are investing in energy efficiency and alternative energy – not because of global warming but in the name of self-sufficiency and reducing U.S. dependence on foreign oil. Don't talk about global warming as an environmental issue, it needs to be about freedom, independence and self-reliance. The key is that global warming can't be talked about as an environmental issue. It needs to be about freedom, self-reliance, and independence from foreign oil.



Sample framing:

America needs to get back on track and restore our place in the world by investing in clean, reliable energy that never runs out. We must become more self-reliant so we don't continue to fall prey to the interests of foreign oil producers who threaten our well-being. Whether you believe global warming is real or not, many corporate leaders see that there is money to be made in low-carbon energy production. And remember, self-reliance starts at home by taking steps to use less energy, such as weather stripping and buying more efficient appliances.

➔ 13% rank global warming as one of the most important issues

- 3% of adults
- 63% male
- 32% make >\$100k
- 53% live in a rural area or small town
- 96% identify as conservatives
- 83% very likely to vote

Values to Tap

National Pride
Importance of Discipline
Confidence in Big Business

Values to Avoid

Ecological Concern
Global Consciousness
Comfort with Ambiguity

VALUES AND NARRATIVE

Connecting with the public on a values level requires the effective use of narrative. As a result, storytelling is a critical part of any global warming outreach and behavior change effort.

Marshall Ganz, Lecturer in Public Policy at Harvard's Kennedy School of Government and a veteran grassroots organizer, focuses on the role of narrative in social change. He argues for the use of storytelling that incorporates enough facts for people to understand the issue at hand, but that also motivates people to action through emotion.

All stories have three parts – a plot, a protagonist, and a moral. A plot gets you interested in an issue by creating tension. It is the unexpected or the unknown. The plot pulls us in because we are all familiar with facing the unknown and having to make choices. In a story, a protagonist faces a challenge and must then make a choice and face the outcome of that choice. When we can identify with the protagonist, the choice outcome teaches us a moral. We feel something, rather than just understand the facts. A powerful story allows us to embrace hope over fear, something greatly needed in the global warming conversation.

To take advantage of how storytelling can motivate action, narrative must reveal who you are and the values you hold to your audience. Ganz calls this the *Story of Self* and it is critical to develop for anyone engaged in public outreach. The *Story of Self* communicates key life experiences that illustrate your moral fiber, from early childhood lessons to major life transformations.

The *Story of Self* must be connected to the *Story of Us* or narrative that emphasizes the organization or community that you are a part of and what it stands for. Rather than a mission statement or factual account, the *Story of Us* shares pivotal moments, both triumphs and failures, that shaped that organization or community. It helps illustrate for others why people would want to associate with your group. Finally, the *Story of Self* and *Story of Us* are joined by the *Story of Now* or narrative that calls out the issues that demands our attention at this moment in time. After sharing values and aspiration, the *Story of Now* reveals that the world is not in keeping with those values and aspirations and that we need to work to resolve the tension created by that disconnect. It emphasizes what is to be lost or gained by taking action and includes a specific request for the audience to join the effort.

By developing narrative that incorporates a story of self, us and now, climate leaders can create more motivating, values-based outreach efforts.

www.hks.harvard.edu/dfs/mganz/teaching.htm

CONCLUSION

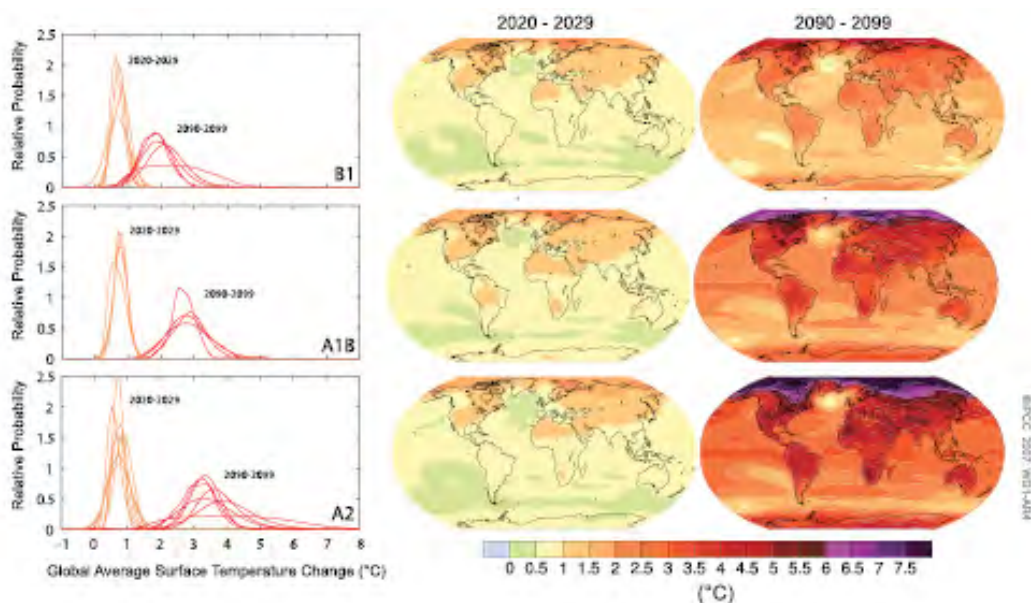
When it comes to addressing global warming, there is often debate among climate leaders as to whether the focus should be on the passage and adoption of climate policies or on individual behavior change. Given the creativity, innovation and determination needed to mitigate and adapt to climate impacts, both approaches are needed and ideally, would be strategically integrated and working together to help with the transition to a more sustainable, low-carbon economy. Rather than having lists of the fifty things that can be done to address global warming, the public wants to know about two or three actions, that if taken regularly, would have the greatest impact. If climate leaders can provide direction on what those actions can be, illustrate how taking those actions fit into the larger picture, and provide regular feedback regarding progress being made, the public is likely to not only reduce carbon but support policies that do the same. Perhaps even more importantly, given the long-term nature of the issue, engaging in individual behavior change helps build the type of social values that underlies sustainable decision-making and can result in support for the enforcement of climate policies.



A Word about the Climate Science Debate

In 2008, the Social Capital Project commissioned a study of five years of public opinion polling on global warming. At that time, except for a small number of climate deniers, debate about climate science had largely died down. The majority of Americans accepted that global warming was real and needed to be addressed. The advice we gave was to leave the science debate behind and to focus on building a sense of urgency and priority by talking about climate impacts and solutions.

In 2009, the climate science debate began once again to dominate the public conversation on global warming. It is important to keep in mind that attacks on climate science are largely being raised by individuals and organizations funded by carbon-emitting energy companies who have an economic stake in avoiding the adoption of new climate policies.




IPCC's projected surface temperature changes for the 21st century

While it is sometimes necessary for climate leaders to respond to attacks on climate science, it is important to avoid taking the deniers' bait by becoming defensive of the science and the need for certainty. A much better bet is to remind audiences that life sometimes calls on us to act responsibly without being 100% certain, and to pivot the conversation to concrete impacts we are already facing, the benefits of addressing global warming and the risks associated with inaction.

Talking Points:

In EcoAmerica's report titled *Climate and Energy Truths*, researchers Drew Westin and Celinda Lake outline a number of arguments that resonate with Americans when it comes to climate science.

- “We can argue why the 10 hottest years in recorded history have all occurred in the last two decades. And we can argue about the causes of the changing weather patterns we've all seen – the floods, droughts, hurricanes, and tornadoes. But whatever the causes, scientists agree there is something we can do about it: stop polluting the air with chemicals that get trapped in the Earth's atmosphere, upset the balance that sustains all of life on Earth, and contribute to diseases like asthma and emphysema.”
- 
- “Local temperatures always fluctuate naturally. But when the 10 hottest years on record have all occurred since 1990, we have a problem. We also have a problem when the American Lung Association reports that toxic chemicals in the air we breathe are affecting the health of nearly half of all Americans. It's time we protect our atmosphere, end our reliance of foreign energy, and recharge our economy by developing a clean, safe energy economy for the 21st century.”
 - “Scientists predicted over 40 years ago that if we didn't stop producing so much pollution from power plants, factories, and cars, it would melt the polar ice caps and lead to changes in the weather, like increasingly destructive hurricanes, droughts, and forest fires. You don't have to be a scientist to understand that. All you have to do is look out your window at mountaintops that used to be snow-covered or watch the news.”
 - “When scientists have come to an overwhelming consensus, like that smoking causes heart disease and cancer, we've always acted. But too often we've delayed because politicians listened to special interests and their paid “experts,” like when the tobacco industry insisted cigarettes were safe. Now we're in the same place again.”

FRAMING IN PLAY

Another critical issue in framing the climate science debate is the choice of messengers. Climate scientists have been the main voices defending climate science yet this often emphasizes that the science is the problem, rather than political, economic, or moral questions involved. At the same time, climate scientists still have an important role to play in reinforcing the threat posed by global warming. Their voices, however, need to be joined by a range of influential thought leaders and experts.

General Gordon R. Sullivan, USA (Ret.) – Chairman, Military Advisory Board, Former Chief of Staff, U.S. Army

“We seem to be standing by and, frankly, asking for perfectness in science... People are saying they want to be convinced, perfectly. They want to know the climate science projections with 100 percent certainty. Well, we know a great deal, and even with that, there is still uncertainty. But the trend line is very clear... We never have 100 percent certainty. We never have it. If you wait until you have 100 percent certainty, something bad is going to happen on the battlefield. That’s something we know. You have to act with incomplete information. You have to act based on the trend line. You have to act on your intuition sometimes. The situation, for much of the Cold War, was stable. And the challenge was to keep it stable, to stop the catastrophic event from happening. We spent billions on that strategy. Climate change is the exact opposite. We have a catastrophic event that appears to be inevitable. And the challenge is to stabilize things – to stabilize carbon in the atmosphere. Back then, the challenge was to stop a particular action. Now, the challenge is to inspire a particular action. We have to act if we’re to avoid the worst effects.”

Vice Admiral Richard H. Truly, USN (Ret.) – Former NASA Administrator, Shuttle Astronaut and the first Commander of the Naval Space Command – SecurityAndClimate.cna.org



“One of the things that struck me on my first day in space is that there is no blue sky. It’s something that every human lives with on Earth, but when you’re in space, you don’t see it. It looks like there’s nothing between you and the surface of the earth. And out beyond that, it looks like midnight, with only deep black and stars... But when you look at the earth’s horizon, you see an incredibly beautiful, but very, very thin line. You can see a tiny rainbow of color. That thin line is our atmosphere. And the real fragility of our atmosphere is that there’s so little of it.”

Senator Lindsey Graham (R-SC) – Addressing the US Senate on Climate and Energy Legislation, January 27, 2010

“A word of caution and warning. Doing nothing, in my view, does put the planet at risk. Doing nothing continues an irresponsible practice of sending \$440 billion dollars a year overseas to buy oil from people who don’t like us very much. Doing nothing allows China to own what I think will be the most exciting economic opportunity of the 21st century, the green economy. As we talk and as we argue and as we try to find 60 votes in America, China is doing.”

In the event you cannot pivot the global warming conversation, here are a few responses to common challenges to climate science.



CHALLENGE — The current warming is just a natural cycle.

RESPONSE — The global climate does experience some natural cycles and variations. But, climate scientists have rigorously examined this issue and determined that natural causes such as solar variability, volcanic activity, and the urban heat island affect are not the cause of today's warming.



CHALLENGE — Recent winters have been exceptionally cold and snowy which shows that average U.S. temperatures are going down, not up.

RESPONSE — Recent winters have been exceptionally cold in some places and exceptionally warm in others. Scientists look at the role of carbon and other greenhouse gases in climate by looking at variations over large areas and long periods of time.



CHALLENGE — Annual mean temperatures in the U.S. have fluctuated for decades and the primary cause is changing solar activity levels and ocean temperatures, not CO₂.

RESPONSE — The mean temperature over the U.S. or any other region does fluctuate from year to year. Nevertheless, the average temperature over all major regions and oceans, including the U.S., has warmed too much over the past century to attribute to purely random changes.



CHALLENGE — Global warming is a hoax created by environmental extremists/liberals/those who want to control others (or regulate industry, create big government, undermine economic growth, redistribute wealth, etc.)

RESPONSE — The Fourth Assessment Report by the Intergovernmental Panel on Climate Change was produced by more than 600 authors from 47 countries, and reviewed by more than 600 experts and governments. In addition, every major international scientific institution dealing with climate, ocean, and/or atmosphere agrees that the climate is warming rapidly beyond natural variability and the primary cause is human-induced carbon emission. The different social cultures and political systems these organizations operate within make it hard to see how they would all be environmental extremists.

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