



Communication Guide

INTRODUCTION

Communicating the intricacies of uncertainty, especially in areas like climate change, is both a challenge and an imperative. The nuances in scientific understanding play a crucial role in how the public perceives and reacts to these issues. Effective dialogue among scientific professionals forms the backbone of impactful public engagement. Given the significant ramifications of topics like climate change on every facet of an individual's life, there is a heightened need for meticulous, clear, and cautious communication.

This handbook is the product of thorough research, drawing from an extensive range of social science studies and other communication guides that delve into similar areas of concern. By integrating these insights, we have curated a guide to assist professionals in their communication efforts, addressing not only the uncertainties surrounding climate change but also other potentially divisive topics. Our goal is to combine tools, resources, and best practices to foster understanding, enhance clarity, and bridge the gap between scientific nuance and public perception. Through the strategies outlined, we aspire to propel informed discussions and nurture trust in the pivotal conversations. We hope that the tools and resources provided in this guide will prove to be useful. --Team CHASM

Knowing Your Audience

In order to know your audience, you have to first identify whom you are trying to reach and figure out what information that audience needs in order for us to reach a consensus with them. This is a process of trial and error, so it is important to continue and research what it is your audience needs to hear, as opposed to what you need to hear.

"If you can, trial or test your messages first to see how they are received. There is no substitute for audience research when it comes to constructing successful climate messages and using language that resonates with the people you want to engage."

--Corner et al., 2015, p. 6

Know Your Audience



--Brunton, M. (2023)

"Understanding one's audience, where its members are coming from, and how they arrived there is the key to unlocking success as a climate communicator."

--Markowitz et al., 2014, p. 6

Defining who the audience is will help identify what information is needed and how it should be communicated. This will help ensure the message aligns with the audience's priorities and world views.

- Who are they?
- What is their level of expertise on this topic? Scientists? Community members?
- How much jargon will they understand/tolerate?
- Likely political alignments (if relevant)?
- What are their priorities? Regional location? Profession? Crop? Local environment?
- What's in it for them? (AKA why should they bother listening to you? How will they benefit from this?)
- What is a reasonable expectation from your audience (i.e., if you're asking them to make change, what change could they reasonably accomplish in their reality? If you want them to use your tools, how will it make their lives easier?)
- What type of presentation is this? Where is it? (e.g. presenting to a large audience: small group conversation; stadium seating; conference room; virtual presentation)

Craft Your Message

"Connecting with your audience on the basis of shared values builds trust between the communicator and the audience. There may be no 'magic words' that will resonate universally, but there are better and worse ways to start conversations about climate change; more and less effective ways to use language and narratives."

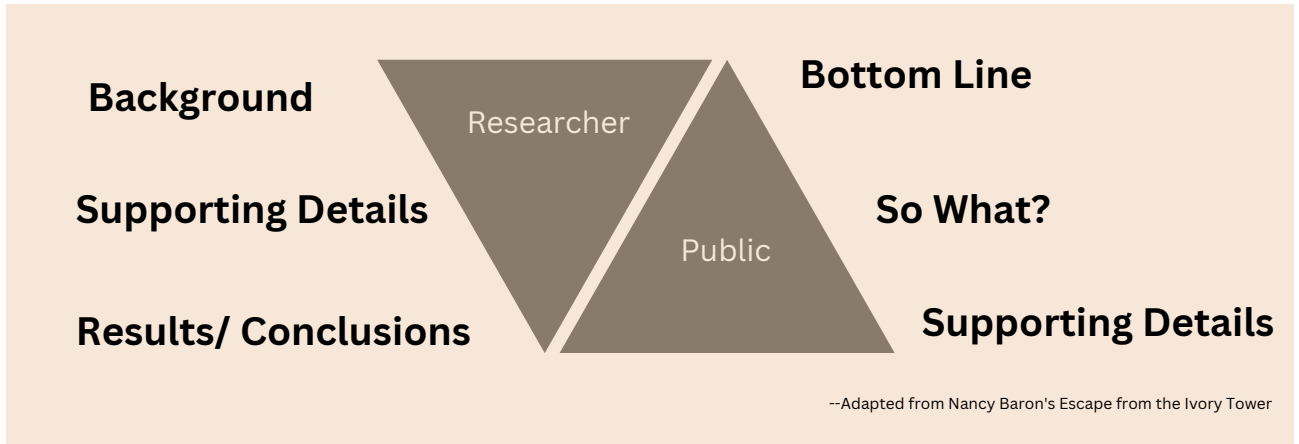
--Corner & Shaw, 2018, p.4



--Brunton, M., (2023)

Communication must be structured differently according to what audience you are trying to communicate with, so it is critical to know the contents of your message and how it may be perceived by lay audiences.

Advice from the American Association for the Advancement of Science:

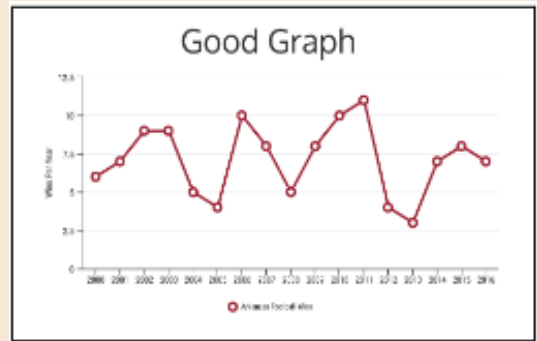
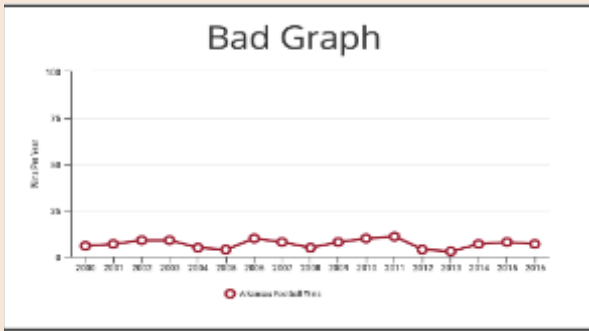


Create a Clear Message

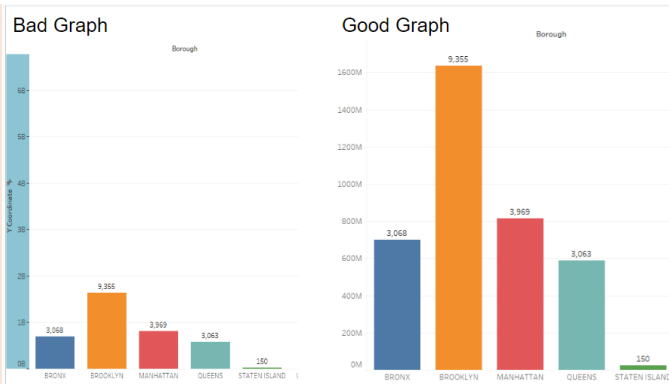
- **The bottom line is FIRST**
 - Lead with what is ALREADY known
 - Craft a message to answer the questions
 - “Why should I care?”
 - “So What?”
- **Keep it SIMPLE**
 - Use basic principles
 - Share KEY points–Three-Point Structure
 - What are three things you want your audience to remember or respond to?
 - Organize your message around those points, leave off the rest unless asked
- **Use clear language**
 - Technical terms are useful, but
 - They might be meaningless to your audience
- **Highlight Solutions**

Data Visualization

Data visualization helps tell the story of the data. People are drawn to colors and patterns which allows one to visualize the story within the data. It makes data easy to understand for a variety of audiences and it makes it easier to spot the relationships and patterns within a data set when the information is presented in a graph or chart.



- **Narrative Expression:** Much like the appeal of colors and patterns in fields such as culture, the arts, and architecture, data expresses a visual narrative. Colors and patterns unveil the underlying store within the data.
- **Enhanced Accessibility:** Data is communicated in a manner that is comprehensible and approachable for various audiences.
- **Unveiling Relationships:** The presentation of data through graphs and charts simplifies the identification of relationships and trends within datasets.
- **Discovery:** The availability of more user-friendly data amplifies opportunities for exploration, collaboration, and the derivation of actionable insights.



--Brunton, M., (2023)

How to Facilitate Change

Swaying your audience's opinion is hard

It is important that when trying to change the opinions of those around us, we are mindful of the reasons why they believe what they do. Regardless of whether or not someone has the belief in something that does not have overwhelming scientific consensus, like vaccines causing autism, they have reached that belief through a process of reasoning that we must acknowledge if we wish to help facilitate a change in that belief. Change is not easy, so this is not something that we should expect to happen after one discussion, rather it is something that will have to foster over the course of many conversations.

"There is now a large body of evidence demonstrating that public opinion about scientific subjects such as climate change is not linked to levels of subject-specific knowledge of general scientific literacy in a straight forward way."

--Corner & Shaw, 2018, p. 11

Because of the gap of knowledge between public opinion and science subjects, we must be ready to explain things that we may perceived to be basic knowledge.

Use proper communication around facts and statistics

Proper communication surrounding facts and statistics is more likely to facilitate change than improper use of them. Anyone can throw around statistics, but relating them to things people already overwhelmingly believe to be true will help further cement your case.



For example, 97% of climate scientists agree that climate change is a result of human intervention, the same kind of consensus that there is surrounding smoking causing lung cancer.

--Corner et al., 2013

Understand your audience's worldview

There are many different worldviews that people have, and it is critical to be able to understand them, especially if they are different from yours. "...Individuals who believe in the benefits of a hierarchically structured world and who support strong individual rights (even at the expense of the group) are likely to be less supportive of climate action, especially when government-run policies or solutions are highlighted" (Markowitz et al., 2014, p.9).

- Conservatives tend to have a stronger association with believing in individual rights. When communicating with them it can be effective to stress the importance of taking care of nature as a responsibility of the individual.


Acknowledge that change is hard:

- If you are asking your audience to make a change in their lives (e.g., adopting a new tool), openly recognize that change does not just happen.
- Change is not an easy thing, and in order to get people to change we must acknowledge that change is hard and understand where people are coming from.

[Refer to SMART GOALS tools at the end of this document]

How to Present Your Message

Connect with your audience

<ul style="list-style-type: none">• Make eye contact• Be upbeat-show you are happy to be there• Move around	 <p>BE YOURSELF</p>	<ul style="list-style-type: none">• Be confident-Use positive body language• Don't read notes, present• Use visual-aids
<p>GET THE AUDIENCE INVOLVED</p> <ul style="list-style-type: none">• Encourage participation• Be a good listener	<p>BUILD TRUST</p> <ul style="list-style-type: none">• Be honest, authentic, and grounded• Show that you care about your audience; listen to their perspectives; take their concerns seriously	<p>SEEK TO UNDERSTAND YOUR AUDIENCE</p> <ul style="list-style-type: none">• Be mindful of and aware of opinions• Acknowledge topic is emotionally powerful• Understanding change is not easy

Tell a human story

- Tell a new story--more thought-provoking; do not rely on worn-out tropes such as sad polar bears
- Use examples your audience will relate to--relevant, real-world, not abstract ideas
- Tell your story-why you are interested in this, how you got into this field, how you did this science; humanize yourself and your interests
- Tell the story of the science in action; someone using new tools or making decisions
- Use powerful storytelling images

Use effective visuals

Bring your message into the audience's context

**Our brains
process visual
information
60,000 times
faster than text**



--Loe et al., 2017, para. 3

Visuals can make or break an audience's ability to understand your message.

- 90% of information transmitted to our brain is visual¹
- 70% of your receptors are in your eyes²
- 50% of your brain is active in visual processing³
- 65% of people prefer visual learning generally⁴

¹ Trafton, 2014 ² Suter, 2017 ³ Muller, 1999 ⁴ Bradford, 2011

**Use Real People and
Authentic Images**



“The reality is that most people understand the world through stories and images, not lists of numbers, probability statements, or technical graphs, and so finding ways of translating and interpreting the technical language found in scientific reports into something more engaging is crucial” (Corner et al., 2015, p. 12).



Show Local Climate Impacts

In order for visuals to be effective, they have to be easy to comprehend and engaging. Appropriate context and resources for facts are also important, as an audience is more likely to engage with visuals that they can understand and look up for themselves.

Evaluate your communication effectiveness

Effective communication requires that there is a listener who has ample opportunity to respond; otherwise, the facilitator acting as the message transmitter is just talking to someone, rather than with someone. Communication asserts that there is a back-and-forth, delivery, and acceptance of messages. Therefore, communication is a channel by which the sentiment, knowledge, evidence, and value of a message can be expressed, received, and reflected (Dasih et al., Filiz, 2020; Hansson et al., 2020; Ihityaroglu, 2019, O'Connor & Shumate, 2018; Ratna, 2019). Therefore, science communicators should strive to have open conversations with their audience in order to facilitate effective communication.

SMART TOOLS

Building on the foundational principles shared throughout this guide, this section introduces a uniquely adapted framework inspired by Jan O’Neill’s “SMART Goals, SMART Schools.” SMART stands for Specific, Measurable, Attainable, Result-focused, and Time-specific. With a focus on shaping and reflecting upon presentations, our adaption extends the SMART technique to enhance both the design and post-delivery phases of your communication.

Embark on this section with the understanding that presentations are not just about conveying information, but about crafting a message, delivering it effectively, and learning from each experience to constantly refine and improve. The SMART Goals approach will serve as your compass, ensuring every presentation you give is grounded in purpose, relevance, and effectiveness.

SMART Goals-Preparation

Identify your Audience:

Communication Objective:

Specific Message:

What will you measure?

How can this be achieved?

How is this relevant to your audience?

What is the timeline? How long will your message be?

SMART Goals-Evaluation

What was your message?

How did you accomplish your goal? How did your communication methods work?

What could you have done better while communicating?

Who was there? Were they receptive to your message?

How did you connect with your audience?

Could you have spoken for a shorter amount of time? Conversely, should you have elaborated more?

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