

# CCGL9065: Our Response to Climate Change: HK2100

Futurologist, Fake News and Histories

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# 1: Introduction to Futurology

- ▶ **Futurology Defined:** Systematic study of future possibilities.
- ▶ **Diverse Practitioners:** Wide range of contributors.
  - ▶ *Insurance agents:* Assess future risks.
  - ▶ *Artists:* Imagine futuristic concepts.
- ▶ Sci-Fi to life: Arthur C. Clarke's satellite prediction
  - ▶ Predicted geostationary (on-orbit) satellites in 1945.
  - ▶ Basis for modern communications.
  - ▶ Launch of Syncom (1963)

## 2: Learning from the Past

- ▶ **Historical Patterns:** Guide to forecasting.
- ▶ **Einstein's Insight:** "New thinking for new problems."
  - ▶ Recognizing the need for innovative solutions.

### 3: Multiple Histories

- ▶ **Varied Perspectives:** History's multifaceted nature.
- ▶ **Impact on Worldviews:** Shapes perception of the future.
  - ▶ *Western vs. Eastern narratives:* Different focuses and lessons.

## 4: Alternative Histories

- ▶ **'What Ifs' Exploration:** Examining different historical outcomes.
  - ▶ *Scenario:* If the Library of Alexandria survived.
    - ▶ Potential acceleration of scientific progress.
- ▶ **Influence on Future Thinking:** Alternative pasts lead to diverse futures.

## 5: The Power of Stories

- ▶ **Narratives Influence Expectations:** Stories shape our view of the future.
- ▶ **Choosing Narratives:** Selecting which stories to carry forward.
  - ▶ *Moon Landing:* Symbolizes human achievement and potential.

# Moon Landing

## Moon landing conspiracy theories

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From Wikipedia, the free encyclopedia



*"Moon hoax" redirects here. Not to be confused with Great Moon Hoax.*

**Moon landing conspiracy theories** claim that some or all elements of the [Apollo program](#) and the associated [Moon landings](#) were [hoaxes](#) staged by [NASA](#), possibly with the aid of other organizations. The most notable claim of these [conspiracy theories](#) is that the [six crewed landings \(1969–1972\)](#) were faked and that [twelve Apollo astronauts](#) did not actually land on the [Moon](#). Various groups and individuals have made claims since the mid-1970s that NASA and others knowingly misled the public into believing the landings happened, by manufacturing, tampering with, or destroying evidence including photos, [telemetry](#) tapes, radio and TV transmissions, and [Moon rock](#) samples.

Much [third-party evidence for the landings](#) exists, and detailed rebuttals to the hoax claims have been made.<sup>[1]</sup> Since the late 2000s, high-definition photos taken by the [Lunar Reconnaissance Orbiter](#) (LRO) of the Apollo landing sites have captured the [Lunar Module descent stages](#) and the tracks left by the astronauts.<sup>[2][3]</sup> In 2012, images were released showing five of the six Apollo missions' [American flags erected on the Moon](#) still standing. The exception is that of [Apollo 11](#), which has lain on the lunar surface since being blown over by the [Lunar Module Ascent Propulsion System](#).<sup>[4][5]</sup>

Despite the fact that they are demonstrably false<sup>[6]</sup> and universally regarded as [pseudoscience](#), opinion polls taken in various locations have shown that between 6% and 20% of Americans, 25% of Britons, and 28% of Russians surveyed believe that the crewed landings were faked. Even as late as 2001, the [Fox television network](#) documentary *Conspiracy Theory: Did We Land on the Moon?* claimed NASA faked the first landing in 1969 to win the [Space Race](#).<sup>[7]</sup>



Astronauts Buzz Aldrin and Neil Armstrong in NASA's training mockup of the Moon and the Apollo Lunar Module. Conspiracy theorists say that the films of the missions were made using sets similar to this training mockup.

Figure 1: Wiki Page on Moon Landing Conspiracy

## 5.1: Moon Landing Controversy - USA's Perspective

- ▶ **Historic Achievement:**
  - ▶ Apollo 11 moon landing in 1969 celebrated as a monumental success.
  - ▶ Symbolized technological and exploratory supremacy.
- ▶ **USSR's Skepticism:**
  - ▶ Claims of inconsistencies in moon landing footage and photos.
  - ▶ Allegations of the moon landing being a Cold War propaganda tool.
- ▶ **Talking Points:**
  - ▶ USA emphasized transparency, broadcasting the landing live.
  - ▶ Highlighted extensive documentation and astronaut testimonials.
- ▶ **Contradictions & Counterclaims:**
  - ▶ Counteracted skepticism with scientific explanations and physical moon rock samples.
  - ▶ Addressed conspiracy theories directly in public discourse.

## 5.2: Moon Landing Controversy - USSR's Perspective

- ▶ **Space Race Competition:**
  - ▶ Intense rivalry to achieve significant milestones first.
  - ▶ Propaganda used to highlight Soviet space achievements.
- ▶ **Casting Doubt:**
  - ▶ Some Soviet officials and media suggested the moon landing could be fabricated.
  - ▶ Raised questions about the technological feasibility and safety.
- ▶ **Talking Points:**
  - ▶ Emphasized Soviet space firsts, like launching the first satellite, Sputnik, and first man in space, Yuri Gagarin.
  - ▶ Questioned the authenticity of NASA's moon landing evidence.
- ▶ **Contradictions & Counterclaims:**
  - ▶ Despite public skepticism, some Soviet scientists acknowledged the moon landing's authenticity.
  - ▶ Over time, official stance softened, recognizing the achievement.

## 6: Questioning Historical Accuracy

- ▶ **Reliability Issues:** Recognizing history's subjectivity.
  - ▶ *Revisionist History:* How textbooks can skew perceptions.
- ▶ **Diverse Future Scenarios:** Result from questioning historical accuracy.

## 7: The Influence of Fake Histories

- ▶ **Fiction's Impact:** How fabricated stories can shape collective memory.
  - ▶ *Orson Welles' "War of the Worlds":*
    - ▶ 1938 radio drama caused public panic.
    - ▶ Demonstrates power of narrative to influence reality.
- ▶ **Critical Thinking:** Importance of discerning fact from fiction.

## 8: Historical Revisionism

- ▶ **Changing Histories:** Continuous reinterpretation of past events.
  - ▶ *Reassessing Legacies:* How views on historical figures evolve.
    - ▶ Shifts in perception about figures like Columbus or Churchill.
- ▶ **Adapting Predictions:** Updating future forecasts with new historical insights.

## 9: Crafting Future Narratives

- ▶ **Imagining Future Stories:** Visioning what tales we'll tell.
  - ▶ *Elon Musk's Mars Plan:* Envisions human settlement on Mars.
    - ▶ Represents ambition, exploration, and potential human resilience.
- ▶ **Narratives' Power:** Today's stories shape tomorrow's realities.

## 9.1: Western Media Perspective on the Ukrainian Invasion

- ▶ **Aggression Framing:**
  - ▶ Described as an unprovoked act of aggression by Russia against Ukraine's sovereignty.
  - ▶ Emphasis on international law violations.
- ▶ **Global Response:**
  - ▶ Coverage of widespread international condemnation and sanctions against Russia.
  - ▶ Support for Ukraine highlighted, including aid and refugee assistance.
- ▶ **Humanitarian Focus:**
  - ▶ Reports on the humanitarian crisis, including civilian casualties and displacement.
  - ▶ Stories of Ukrainian resilience and resistance.
- ▶ **Critiques of Russian Narrative:**
  - ▶ Questioning of Russian motives and justifications for the invasion.
  - ▶ Examination of the impact on global stability and European security.

## 9.2: Russian-Friendly Media Perspective on the Ukrainian Invasion

- ▶ **Security Concerns:**
  - ▶ Framing the action as a response to security threats and NATO's eastward expansion.
  - ▶ Emphasis on protecting Russian-speaking populations in Ukraine.
- ▶ **Historical Context:**
  - ▶ References to historical ties between Russia and Ukraine to justify intervention.
  - ▶ Portrayal of the action as reclamation or unification, not invasion.
- ▶ **Western Influence:**
  - ▶ Accusations of Western meddling in Ukrainian affairs and provoking conflict.
  - ▶ Critique of Western sanctions as unjust and harmful to global relations.
- ▶ **Narrative Control:**
  - ▶ Attempts to control the narrative through state media and censorship of dissenting views.
  - ▶ Dismissal of Western reports as biased or fake news.

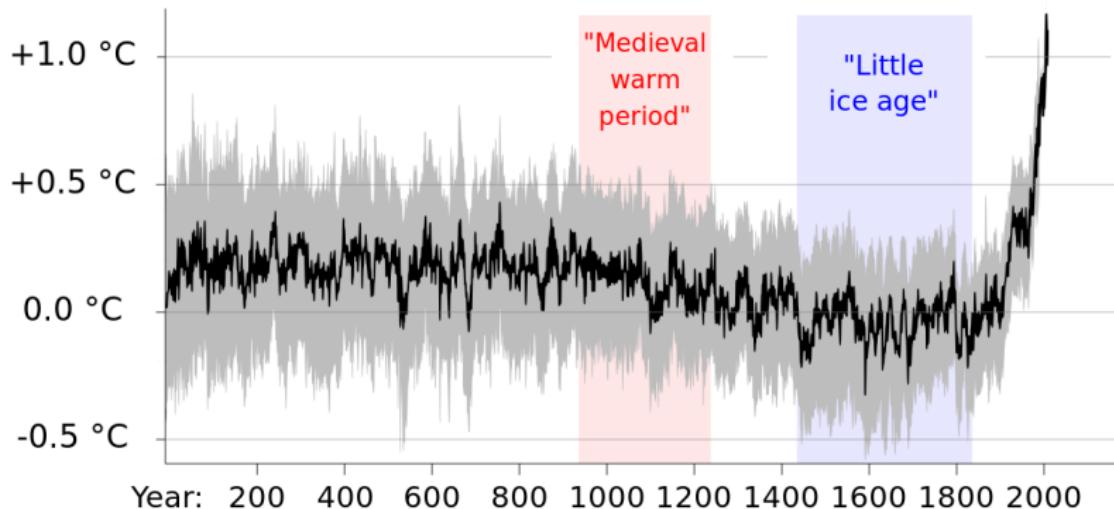
## 10: Embracing Complexity in Futurology

- ▶ **Forecasting Complexity:** The multifaceted nature of predicting the future.
- ▶ **Informed Approaches:** Leveraging a nuanced understanding of history.
  - ▶ *Butterfly Effect:* Small changes can lead to significant consequences.
  - ▶ Understanding chaos theory's implications for prediction.

## 11: Known Historical Discrepancies of Climate-Change Related Stories

# Mideval Warm Period

## Global Average Temperature Change



Prior graphic by Ed Hawkins. Data: from PAGES2k and HadCRUT 4.6 for 2001-1. Reference period: 1850-1900.

Figure 2: Mideval Warm Period (Wikipedia)

## 11.1: Medieval Warm Period (MWP) Debate:

- ▶ **Controversy:** The MWP refers to a time from about 950 to 1250 AD when temperatures were thought to be **unusually warm** in some regions of the North Atlantic. The debate centers around the extent, timing, and global impact of the MWP.
- ▶ **Differing Interpretations:**
  - ▶ Some climate change skeptics have used the MWP to argue that *current global warming is part of a natural climate variability.*
  - ▶ In contrast, the majority of climate scientists contend that current warming is **unprecedented and largely anthropogenic.**
- ▶ **Impact on Climate Change Discourse:** The controversy has fueled discussions about the reliability of climate models and historical climate data reconstructions.

## Climate-Change as Fake, News from Trump's Claim

*"The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive."*

*(Trump, Tweet, 2012)*

## Explanation & Fact-check

### **Explanation:**

This is a conspiracy theory claiming climate change was intentionally fabricated by China to damage U.S. economic interests, without scientific or historical basis.

### **Fact-check:**

Climate science dates back to the late 19th century, long before contemporary Chinese economic policies. It's supported by NASA, NOAA, and the IPCC.

## Climate-Change as Fake, News from Trump's Claim, Case Two

*"It used to not be climate change, it used to be global warming... That wasn't working too well because it was getting too cold all over the place."*

*(Trump, Interview with Piers Morgan, 2018)*

## **Explanation & Fact-check**

### **Explanation:**

Trump confuses short-term weather variations with the long-term trend of climate change.

### **Fact-check:**

Global temperatures have consistently risen over decades (NASA/IPCC). Terminology shifted to “climate change” reflecting broader impacts.

## Hockey Stick Graph

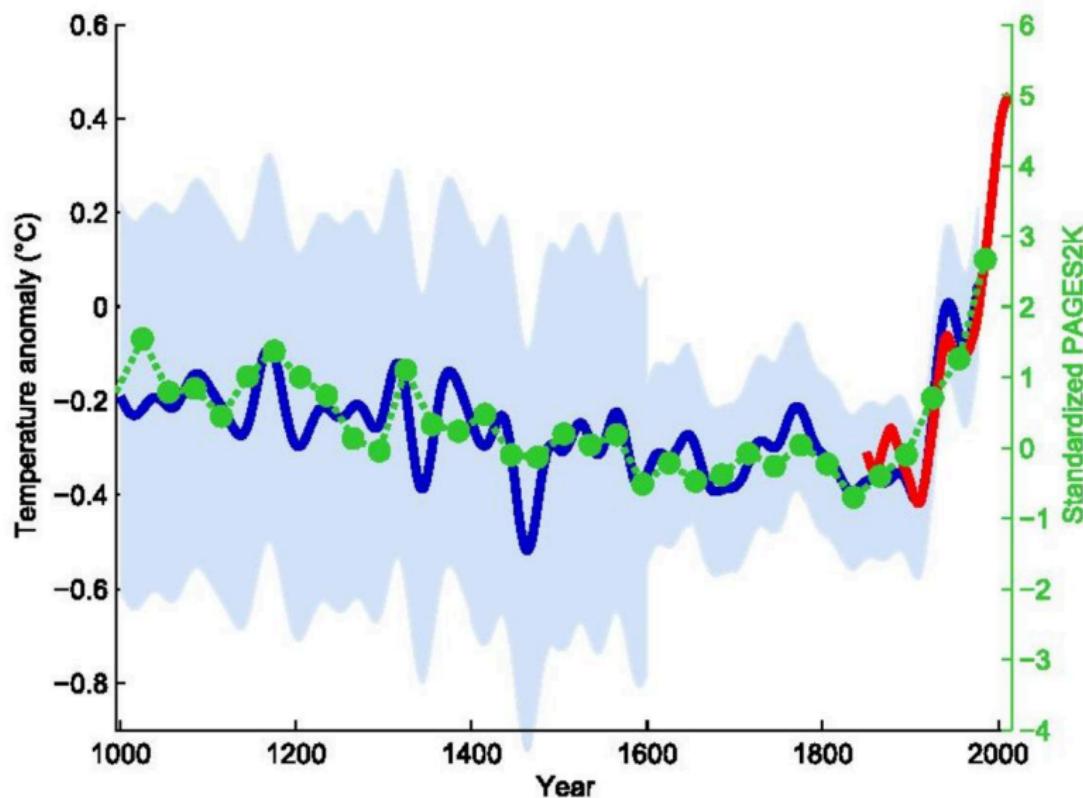


Figure 3: Hockey Stick Graph (Wikipedia)

## 11.2: Hockey Stick Graph Controversy:

- ▶ **Controversy:**
  - ▶ The “hockey stick graph,” first published by Michael Mann and colleagues in the late 1990s, showed a sharp rise in global temperatures in the 20th century after a long period of relative stability, resembling a hockey stick.
  - ▶ Critics questioned the data sources, methodologies, and statistical techniques used to create the graph.
- ▶ **Differing Interpretations:**
  - ▶ Skeptics used the controversy to challenge the consensus on anthropogenic global warming,
  - ▶ numerous scientific bodies and researchers have since reaffirmed the graph’s general conclusion about significant recent warming.
- ▶ **Impact on Climate Change Discourse:** The controversy highlighted the challenges of paleoclimate reconstruction and the politicization of climate science.

## Climategate

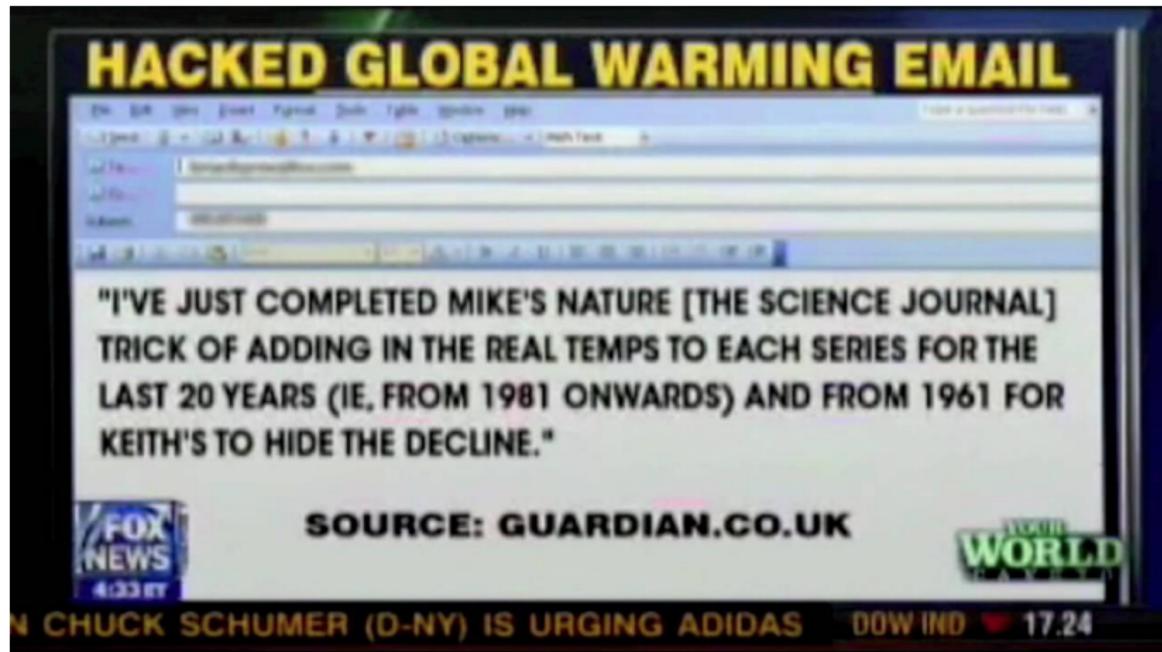


Figure 4: Climate Gate Snippet

## 11.3: Climategate Email Controversy:

- ▶ **Controversy:**
  - ▶ In 2009, a significant number of emails and documents were leaked from the University of East Anglia's Climatic Research Unit (CRU).
  - ▶ Critics alleged that the emails showed scientists discussing *ways to manipulate data and suppress dissenting views.*
- ▶ **Differing Interpretations:**
  - ▶ Climate change skeptics claimed the emails proved scientific misconduct and conspiracy among climate scientists.
  - ▶ However, several independent investigations cleared the scientists of wrongdoing, concluding that the emails were taken out of context.
- ▶ **Impact on Climate Change Discourse:** “Climategate” fueled public skepticism about climate science and the integrity of climate researchers, despite the lack of evidence for scientific fraud.

## Climate-Change as Fake, News from Trump's Claim, Case Three

*"The ocean is going to rise by 1/100th of an inch over 400 years. That's not our problem."*  
*(Trump, Rally, December 2015)*

## Explanation & Fact-check

### **Explanation:**

Trump significantly understates sea-level rise projections and the associated risks.

### **Fact-check:**

IPCC projects global sea levels could rise approximately 0.3–1.1 meters by 2100, causing severe impacts on coastal communities.

## 12.1 Enhancing Perspectives

### What We Are Doing:

- ▶ Engaging in a role-play activity that simulates a debate around the theme of Decolonizing Ocean Science within the Hong Kong context.
- ▶ You will assume roles advocating for “pro-climate-change” (Pro-CC) policies and anti-climate-change (Anti-CC) viewpoints, as well as various stakeholder positions.

### Why We Are Doing It:

- ▶ To explore diverse perspectives on complex issues that intersects futurologists, fake news, and power of narratives in face of historical accounts.
- ▶ To understand the implications of policy decisions and scientific practices on different communities and the environment.
- ▶ **To foster empathy and critical thinking** by stepping into the shoes of various stakeholders affected by these issues.

## 12.2 Enhancing Perspectives (Continued)

How does these activities help:

- ▶ They highlights the nuances in the climate change debate on various issues - angles of historical accounts that can/may be contradictory for this week.
- ▶ Encouraging informed discussions on how traditional and scientific knowledge can complement each other in addressing pressing environmental challenges.

Our Classroom Environment:

- ▶ This is a **safe space** for exploration and discussion.
- ▶ There are no wrong answers here, only opportunities to learn and understand different viewpoints.
- ▶ Respect and open-mindedness are our guiding principles. Every opinion shared is valued and contributes to our collective learning.
- ▶ Feedback and reflection are encouraged. This is a chance to voice thoughts, ask questions, and grow from the experience.

## Let's Assign Groups Again

# Group Discussion Reform: Climate Change Persona Discussion (10 min)

## 1. Introductions

- ▶ Briefly introduce your persona:
  - ▶ Name, occupation, or role in society.
  - ▶ One sentence on how climate change directly impacts your persona.

## 2. Round-table: Share Key Insights

- ▶ Identify one major climate issue your persona is most concerned about and explain it to others
- ▶ Explain briefly how this issue directly affects your group or personal priorities

## 3. Converse more

- ▶ Engage with others by asking at least one question to another persona about their views or challenges related to climate change.
- ▶ Respond openly, staying true to your persona's motivations, beliefs, and professional interests.
- ▶ Any common grounds you could identify? Any persona from the group has a better point?
- ▶ Acknowledge the different perspectives in a respectable manner

## Extra: Perspective Cheatsheets

## Ex.1: Pro-CC Policy Suggestions

- ▶ **Aggressive Emission Reductions:**
  - ▶ Implement strict carbon caps.
  - ▶ Incentivize renewable energy adoption.
- ▶ **Sustainable Infrastructure:**
  - ▶ Invest in green public transport.
  - ▶ Retrofit buildings for energy efficiency.
- ▶ **Conservation Efforts:**
  - ▶ Expand protected natural areas.
  - ▶ Promote biodiversity restoration projects.
- ▶ **Green Innovation:**
  - ▶ Fund research in sustainable technologies.
  - ▶ Support startups with green solutions.
- ▶ **Global Cooperation:**
  - ▶ Strengthen international climate agreements.
  - ▶ Provide aid for vulnerable countries' climate resilience.

## Ex.2: Anti-CC Policy Stances

- ▶ **Economic Growth Focus:**
  - ▶ Prioritize policies that ensure economic stability.
  - ▶ Balance environmental regulations with business interests.
- ▶ **Energy Independence:**
  - ▶ Support a diverse energy portfolio, including fossil fuels.
  - ▶ Invest in clean coal and natural gas technologies.
- ▶ **Market-Driven Solutions:**
  - ▶ Encourage voluntary corporate sustainability initiatives.
  - ▶ Leverage market forces to drive environmental innovation.
- ▶ **Adaptation Strategies:**
  - ▶ Focus on adapting infrastructure to withstand climate impacts.
  - ▶ Invest in flood defenses and drought-resistant agriculture.
- ▶ **Regulatory Caution:**
  - ▶ Avoid over-regulation that could hinder industrial competitiveness.
  - ▶ Implement flexible policies that allow for business innovation.

## Ex.3 General Public Engagement and Response to Climate Challenges and Misinformation

- ▶ **Logistics Professionals:**
  - ▶ **Sustainable Practices:** Adopt green logistics and transportation methods.
  - ▶ **Fact-Checking:** Verify sources when addressing climate-related logistics issues.
- ▶ **Policymakers/Bureaucrats:**
  - ▶ **Informed Policy Making:** Base policies on scientific evidence and consensus.
  - ▶ **Public Education:** Lead initiatives to educate the public on climate facts vs. misinformation.
- ▶ **Light Workers (Community and Social Workers):**
  - ▶ **Community Resilience:** Support community-led climate resilience and adaptation projects.
  - ▶ **Misinformation Awareness:** Organize workshops to improve media literacy on climate topics.
- ▶ **Essential Workers:**
  - ▶ **Workplace Sustainability:** Advocate for sustainable practices in essential services sectors.
  - ▶ **Critical Engagement:** Question and verify climate

## Ex.3 (Continued)

### ► Farmers:

- ▶ **Climate-Smart Agriculture:** Implement and share practices that increase resilience to climate change.
- ▶ **Local Knowledge Sharing:** Counter misinformation by sharing local, evidence-based agricultural successes.

### General Strategies for All:

- ▶ **Critical Consumption of Information:** Practice critical thinking and verify information through reputable sources.
- ▶ **Community Dialogue:** Engage in open discussions to address climate change misinformation.
- ▶ **Advocacy and Activism:** Support and participate in campaigns that advocate for truthful, science-based climate communication.