Communicating the Science of Climate Change

Mike McPhaden
NOAA/PMEL
Seattle, Washington, USA

Meeting of the Americas
Iguassu Falls, Brazil
11 August 2010
The Climate is Changing...

"Warming of the climate system is unequivocal..."

IPCC, 2007

Indicators

- Rising air temperatures
- Rising sea level
- Melting glaciers
- Disappearing Arctic sea ice
- More heat waves & extreme rainfall events
- Ocean acidification...

The Intergovernmental Panel on Climate Change (IPCC) is sponsored by the United Nations Environmental Program and the World Meteorological Organization to provide objective scientific assessments of human induced climate change.
And we know why

“Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed anthropogenic greenhouse gas increases.”

IPCC, 2007
Global Average Surface Temperature Projections

Range of warming expected by the end of the 21st century is between 2°-5°C.

But since 2000, GHG concentrations have risen more rapidly than the most aggressive emission scenario.
2007 Nobel Peace Prize

"for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change"
An Inconvenient Truth

Two academy awards in 2007, including “Best Documentary”
Do you think human activity is a significant factor in changing mean global temperatures?
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EOS, Trans. AGU, 20 Jan 2009
Is the Threat of Global Warming Exaggerated?

Gallup Public Poll
Barriers to Acceptance of Climate Change as Real

- Complexity of the science and its uncertainty
- Economic costs of mitigation and adaptation
- Attacks from the “Denial Machine”
- Media portrayals climate change science
Global Warming Is A Hoax.*

* Or so claim well-funded naysayers who still reject the overwhelming evidence of climate change. Inside the denial machine. By Sharon Begley
NEW AGU Strategic Plan
Approved by AGU Council 7 June 2010

Vision Statement

AGU galvanizes a community of Earth and space scientists that collaboratively advances and communicates science and its power to ensure a sustainable future.
Focus of Specific 3-5 Year Goals

Scientific Leadership and Collaboration
For innovative, rigorous, interdisciplinary studies of global issues.

Talent Pool
Build a diverse and inclusive global talent pool of Earth and space scientists.

Organizational Excellence
Operations are sustainable, transparent, and inclusive in ways that are responsive to members and stakeholders.

Science and Society
AGU engages members, shapes policy, and informs society to enable solutions for the sustainability of the planet.

http://www.agu.org/about/strategic_plan.shtml
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Science and Society

One specific objective: “Increase awareness of the reality and consequences of global climate change among scientists, policymakers, and the public.”

- Deliver credible, authoritative information on the science, the scientific method, the peer review process
- Target mainstream media (as for Copenhagen & “Climategate”)
- Host science blogs on AGU web site
- More outreach to members (e.g., communications workshops, visits to Capitol Hill, etc.)
The Weatherman

"often the most visible representatives of science in U.S. households"

- 27% believe global warming is scam
- 33% do not believe there is scientific consensus
- 62% want to report more on climate change
- 66% of viewers trust the weatherman’s opinion

AGU will participate in a George Mason University-led effort to pair broadcast meteorologists with climate scientists to better inform the public about climate change

Source: George Mason University Center for Climate Change Communication
We have an obligation to “advance and communicate science and its power to ensure a sustainable future.”

World sizzles to record for the year
16 July 2010

Russian heat wave & wildfires
August 2010

Pakistan floods
August 2010