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Editorial

A Second Type of Disaster Politics?

Most people familiar with government politics and disasters would not be surprised by Rutherford Platt's assertion that, "cynical or not, disasters are often good for the business of government as well as the reelection prospects of politicians." But in recent years, there seems to be a second type of disaster politics emerging: Disasters have become caught up in the usually partisan and sometimes virulent debate over global warming.

For example, consider the 18 April 2000 joint news conference (www.noaanews.noaa.gov/stories/s412.htm; www.fema.gov/nwz00/nwz00_09.htm) of the National Oceanic and Atmospheric Administration (NOAA) and the Federal Emergency Management Agency (FEMA) "which focused on global climate change and links between a warming atmosphere and more severe weather."

At the news conference, NOAA released its most recent data on temperature trends in the United States, showing that "The United States has just experienced the warmest January-March period ever." The NOAA Administrator stated, "Our climate is warming at a faster rate than ever before recorded. Ignoring climate change and the most recent warming patterns could be costly to the nation. Small changes in global temperatures can lead to more extreme weather events including droughts, floods and hurricanes."

The FEMA Director then reported that "There is no doubt that the human and financial costs of weather related disasters have been increasing in recent years" and cited data showing that "more frequent and severe weather calamities and other natural phenomena during the past decade required 460 major disasters to be declared, nearly double the 237 declarations for the previous ten-year period and more than any other decade on record."

Then in a speech the following day the FEMA Director observed (www.fema.gov/library/jlw0041800.htm), "the conditions that will shape this hurricane season are brewing over our oceans. But the decisions that will determine its impact on our lives are being made in our communities. They are made when we pump greenhouse gases into the air . . ."

I have no particular insight into the origins of these comments or the purposes for which they were made. But let's assume that, as important and authoritative national resources, FEMA and NOAA were putting out this information because the impacts of weather and climate are a matter of national concern. If so, then both FEMA and NOAA are unaware of the implications of recent (and not so recent) research in this area, specifically the following:

- Changes in societal vulnerability, not climate, account for the growth in the costs of disasters. In the case of Presidential Disaster Declarations, it is presidential discretion that explains most of the growth in "major disasters" not "more frequent and severe weather calamities."
- This year's greenhouse gas emissions will have no discernible influence on the impacts of the upcoming hurricane season.
- The most effective strategies for dealing with disasters actually have nothing to do with global warming. They include measures that the FEMA Director mentioned after "pump greenhouse gases into the air," such as: "[not] build in flood plains ... [not] pave over our coastlines ... retrofit our buildings" and so on.

A less generous interpretation of the news conference is that it was held to lend support to the Administration's climate change policies. If so, then FEMA and NOAA actually may have done more harm than good. For instance,

- By misattributing the causes of growth in weather and climate extremes over the past few decades, they have provided ample fodder for the legions of so-called “contrarians” who oppose action on energy policy to combat climate change.
- They have placed scientists (like myself) who may think climate change is an important national issue in a difficult position of having to respond – when asked by the media, for example – that the federal agency information is actually contrary to current scientific understanding. This creates an unnecessarily divisive situation among parties ostensibly working toward the shared goal of improving national policies in response to extreme weather and climate.
- And an irony of recent research is that if the nation decides to reduce its federal disaster costs, then the most effective response would be to ignore energy policy and adopt stingy federal disaster assistance policies like those of Ronald Reagan, not the more generous policies of Bill Clinton! Now, whether reducing those costs is a good idea or not is a different matter altogether . . .

To be fair to both FEMA and NOAA, on 10 May 2000 they held another news conference on the 2000 hurricane season (www.noaanews.noaa.gov/stories/s425.htm; www.fema.gov/nwz00/nwz00_15.htm). FEMA emphasized the practical steps needed to better prepare for hurricanes and, in response to a question, the NOAA Administrator clearly dismissed any connection between hurricanes and global warming. But the apparent contradiction with both agencies' earlier statements might send a mixed message to the media and the public.

The lesson from all of this seems clear. Natural disasters and energy policy advocacy simply don't mix. Even if the future number and intensity of climate extremes increases as a result of greenhouse gases (or anything else for that matter), the dominant role of increasing societal and environmental vulnerability in the resulting impacts means that preparing for future impacts depends much more on disaster “mitigation” than any conceivable energy policy “mitigation.” See www.esig.ucar.edu/socasp/zine/5.html#1. More effective energy policies certainly make sense to me, but not as a means to address disasters. The sooner we depoliticize this second type of disaster politics, the better.

--Roger A. Pielke, Jr.

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Guest Editorial

[Note from the Editor: The editorial in the last issue (Six Heretical Notions About Weather Policy, April 2000 WeatherZine, www.esig.ucar.edu/socasp/zine/21/editorial.html) provoked a number of responses. In an effort to continue a dialogue on these topics, we highlight two of these letters in the Guest Editorial space. The first is from Robert Gall, Chief Scientist of the U.S. Weather Research Program (uswrp.mmm.ucar.edu/uswrp.html), and the second is from Michael MacCracken, most recently the Director of the U.S. Global Change Research Program.]

Dear WeatherZine,

A couple of comments on Six Heretical Notions About Weather Policy, April 2000 WeatherZine:

1. Yes there is more data being taken than is used, and that reflects, in part, the process that determines which new observation systems are selected for deployment. Often times what gets chosen for deployment is more a function of who can shout the loudest, who the best lobbyists are, etc., rather than what makes most sense in terms of driving the forecasts systems toward the limits of predictability. If the observing system isn't optimally chosen there will be a tendency not to use the data or only use a small portion of the data. Another problem is that it seems to be relatively easy to obtain funding for development and deployment of certain observing systems but almost no funding is available to develop the systems that are necessary to use the data in the operational forecasting process. Today this usually means developing data assimilation systems that would go with the new data source. There is an assumption that somehow or other that will just happen after the new observing system is deployed, but history shows that it doesn't or it happens very slowly, mostly because of very limited resources for research and development of the systems that take the data and use it in the forecast process.

2. You state that, “approximately \$2-3 billion is spent on weather and climate research and operations each” which I take to mean that \$ 2-3 billion is being spent on weather research. I'd like to see an accounting of how you reached that number. I suspect that you are off by more than an order of magnitude.

[Editor's note: We apologize for the ambiguous wording. The term “each” refers to weather AND

climate, not research AND operations. The budgets for weather can be found on our Weather Policy page at www.esig.ucar.edu/socasp/policy.html, and the budget for the U.S. Global Change Research Program can be found at www.gcrio.org/ocp00/ in the publication "Our Changing Planet."]

3. Yes, there are significant resources that are going into weather research and we are making progress. A figure (www.esig.ucar.edu/socasp/img/gpf.gif) that we have been using shows skill scores for precipitation forecasts where there is a slow upward trend. I contend that that trend represents the collective effects of current weather research spending. If the country is happy with that trend then I suppose that we have no real need to ask for additional funding to accelerate the trend. But recent events suggest that the public expects much more and that this rate of improvement is unacceptable. A case in point is the January snowstorm where the model guidance for the 24 hour forecast was really pretty good in that a storm along the coast was predicted, though too far east by 100 km or so. That is, the forecast models predicted the snow to be just off shore where, in reality, the heavy snow band passed directly over Washington, DC. The error was only a couple of grid points in the model, meaning the error was close to the best we can do with current technology, yet the public was horrified and demanded more. Granted we can probably take the same models that produced the failed forecast and through tweeking of data, model physics etc., make them make a good forecast for that event, and we probably will, but we need to improve the entire forecast system to a point where the chances for error like we saw in January are reduced. We have to pick up the pace of improvement in the model forecasts and in the total operational forecast system to keep up with the accelerating demand for accuracy.

Robert Gall
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Dear WeatherZine,

RE: On how big is a billion and the benefits of chaos

The last issue of WeatherZine (Six Heretical Notions About Weather Policy, April 2000 WeatherZine) suggested that "public funding for the atmospheric sciences is truly enormous—approximately \$2-3 billion is spend (sic) on weather and climate research and operations each." I would note that probably half or more of which is for satellite based information.

Just a note that, for the U.S., \$1 billion a year for a program amounts almost exactly to a penny a day per person over the year. So, you are suggesting that we are each spending the truly enormous amount of about

a nickel a day on understanding and predicting tornadoes, the daily weather, hurricanes, El Ninos, climate change, ozone depletion, past climates, sea level rise, environmental and socioeconomic consequences, and a host of other related aspects of environmental change that affect how we dress, what we do, what danger we are in, the world our grandchildren will inherit, etc., etc. This is not to say this is not a lot of money, but I do think a bit of perspective is also needed.

I'll let you do the comparisons with other parts of the federal budget like defense, health, foreign aid, etc. (or with other daily activities we all engage in) and to decide if the public is really getting useful output for its investment, even as you suggest useful ideas (as the rest of the article did) on how we could get even more value for our investment.

I also note with some humility your seeming call for more order and less overlaps and chaos, if you will. In my days during the 1980s traveling so much to the former Soviet Union, I was always struck by the fact that having a perfect, non-overlapping plan for delivering food to Moscow (one kind of soda, one kind of chicken, prices the same everywhere, etc.) seemed so appealing but was so much less successful than the chaos of how New York is fed each day, there surely being no master plan and an amazing overlap and uncountable myriad of products of all types, some appealing to many people, some just to a few. It was always a bit hard to try to explain to my Russian friends that everything would work much better if they had no plan at all and just set up a very few basic rules to keep the market functioning fairly. It seems to me that the same sort of situation applies to our field (and others)—if all we did was have one agency providing funding, only one investigator studying each subject, only the data sets we could actually use right this moment, I think we would find that the whole system would work much less well than the seemingly chaotic system we have (with our basic rules being peer-review and finite term awards). I won't disagree that we might be able to do a bit better, ask better questions, etc., but I think one really has to carefully think through whether having everything perfectly and centrally organized would really be better than having a diversity of views and interests and sources of funds. Are you not really proposing the equivalent of recombining the Baby Bells? In my view, we all need to learn to value the competition (overlap) and apparent chaos in that its overall effect seems to be to better get people what they really need.

Mike MacCracken
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Correspondence

Dear WeatherZine

In response to the article by Thomas Birkland (Earthquakes and Weather: Lessons for Policy and Science, April 2000 WeatherZine, www.esig.ucar.edu/socasp/zine/21/guest.html), how timely. I had just watched the Nova produced Frontline special last night (4/18), "What's Up With the Weather?" It is quite possible that a group approach "focused on the needs of policy makers" may be more successful at this point in time as public awareness on the issue of the weather impacts of climate change increases. After showing the Senate passing a resolution 95 to ZERO against the Kyoto agreement, Congress may just need something that it can vote FOR as an alternative, to show it is responding.

On the other hand, to continue with the theme of heretical notions (Six Heretical Notions About Weather Policy, April 2000 WeatherZine, www.esig.ucar.edu/socasp/zine/21/editorial.html), if the considerable sum already spent on climate change research can come up with no better than somewhere between a 1 and 8 degree average global increase in temperature over 100 years (if I have stated it correctly), this may generate some resistance?

Regardless, politics is the mechanism, flawed as it is, whereby we decide how our money gets spent. I would suggest that this particular issue is one where the presidential candidates have totally different views, and the potential success of a Weather Research Institute proposal could be expected to be received more "warmly" by one than the other.

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Weather Related News

From the AMS Web Site, www.ametsoc.org/AMS/

William H. Hooke, the director of the National Oceanic and Atmospheric Administration's U.S. Weather Research Program (USWRP) Office, will join the American Meteorological Society (AMS) as senior policy fellow and associate director of the Society's Atmospheric Policy Program, the organization announced recently. Hooke will begin at the AMS Washington, D.C., office June 5, 2000.

The AMS Atmospheric Policy Program, underway since October 1999, is a unique initiative designed to foster research, education and discussion about issues and policies related to the atmospheric and related oceanic and hydrologic sciences. Specifically, the program supports scholarly research efforts and forums to address important policy questions and encourage informed policy decisions. In addition, the Program will conduct workshops, seminars, and colloquia on policy issues aimed at today's meteorology students and mid-career scientists. Dr. Richard S. Greenfield is the director of the Atmospheric Policy Program. In January 2000, Dr. Robert W. Corell joined the Program as a senior fellow.

"The knowledge and experience in shaping public policy that Bill Hooke brings to the AMS Atmospheric Policy Program greatly expand the services that we can provide to the atmospheric sciences community," said Greenfield. "Bill will play a central role in our efforts to forge effective partnerships with academia, relevant government agencies, and the private sector to address significant policy issues and to develop policy-relevant educational activities."

"Drs. Greenfield, Corell, and Hooke place our Atmospheric Policy Program in a position to bring broad public policy expertise to bear on important atmospheric and related scientific issues," said Ronald McPherson, AMS executive director. "I anticipate that the results of their efforts will be important at the national level."

After almost 33 years of federal service, Hooke will retire on June 3, 2000. His NOAA tenure includes 20 years of research and research management in Boulder, Colorado. The last three of those years he led what is now NOAA's Forecast Systems Laboratory, which played a pivotal role in systems development for the National Weather Service Modernization. He moved to Washington in 1987, where he was Deputy Chief Scientist of NOAA until 1993.

For the past five years, while directing the USWRP, he also chaired the White House National Science and Technology Council's Subcommittee on Natural Disaster Reduction. In that role he coordinated the efforts of 19 federal agencies to reduce losses from extreme events, and led a major partnership bringing together the federal government, insurers, non-governmental organizations and academia to highlight these issues for policymakers in the Executive Branch and Congress. He played an important role in U.S. formulation of and participation in the United Nations' International Decade for Natural Disaster Reduction.

Selected Web Site Additions

Many thanks to Thomas Pagano of the University of Arizona for providing us with numerous citations which we have added to our Weather and Climate Forecast Use and Value Bibliography (www.esig.ucar.edu/biblio/index.html).

General Weather Resources

www.cdc.noaa.gov/
Climate Diagnostics Center

The mission of the NOAA-CIRES Climate Diagnostics Center is to identify the nature and causes of climate variations on time scales ranging from a month to centuries. The goal of this work is to develop the ability to predict important climate variations on these time scales. The CDC provides several resources including its Map Room Weather Products (www.cdc.noaa.gov/~map/maproom/text/weather_products.shtml), Map Room Climate Products (www.cdc.noaa.gov/~map/maproom/text/climate_products.shtml), and Display and Analysis Web Pages for CDC Climate Data (www.cdc.noaa.gov/PublicData/web_tools.html).

www.noaanews.noaa.gov/stories/s334.htm
Century's Top Weather, Water, and Climate Events

NOAA chose the top weather, water, and climate events of the 20th century, taking into consideration an event's magnitude, its meteorological uniqueness, and its economic impact and death toll. Events include the 1900 Galveston hurricane, the Dust Bowls of the 1930s, 1969 Hurricane Camille, the 1993 Midwest Floods, and the 1999 Oklahoma-Kansas tornadoes, among others. The site includes extensive background information, photos, satellite images, animation of the storms, links, and contact information.

www.doi.gov/nathaz/index.html
U.S. Department of the Interior Natural Hazards

This Department of the Interior site is devoted to natural hazards including floods and storms. Links and a fact sheet are provided for each topic.

www.comet.ucar.edu/resources/cases/
COMET Web-based Case Study Library

The Cooperative Program for Operational Meteorology Education and Training (COMET) provides educational materials for meteorologists and other hazards professionals. This web site includes over 20 case studies of meteorological data for specific events including the May 3, 1999, Oklahoma/Kansas tornado

outbreak; Hurricane Floyd; severe rain and flooding in Kansas in October 1999; and an outbreak of severe weather in the Northeast in June 1998.

www.nws.noaa.gov/om/svrawar/svrwx.htm
Severe Weather Awareness

This NWS Office of Meteorology site provides information about actions you can take to protect yourself, family, pets, and property from severe weather such as thunderstorms (including high winds, hail, and lightning), tornadoes, and floods. Valuable information about how to respond to severe weather is also included.

El Niño/La Niña

www.cdc.noaa.gov/ENSO/
El Niño/Southern Oscillation (ENSO) Information

This site from the NOAA-CIRES Climate Diagnostics Center covers topics such as what happens during an El Niño/La Niña cycle? What are the effects of El Niño/La Niña on climate and individual weather systems? What is the current state of El Niño/La Niña? Also included are FAQs, a glossary, other links and publications, forecasts and advisories, and educational resources.

Emergency Management

www.unisdr.org/
International Strategy for Disaster Reduction (ISDR)

The International Decade for Natural Disaster Reduction (IDNDR) officially ended in 1999. Its successor, the International Strategy for Disaster Reduction (ISDR), has two goals: disaster prevention and helping communities reduce the risk of longer-term social and economic disruption in the face of a natural hazard. This site provides background information about the ISDR; a list of ISDR and ISDR-related events; on-line versions of the ISDR newsletter; descriptions of various ISDR initiatives; and numerous reports, tools, brochures, and U.N. documents.

state-of-coast.noaa.gov/default.html
State of the Coast

This NOAA site provides a series of essays on coastal issues such as "Population at Risk from Natural Hazards," and "Reducing the Impacts of Coastal Hazards." These essays include overviews of the problem on a national scale, regional analyses, specific case studies, interviews with experts, suggested readings and references, and glossaries.

www.tallytown.com/redcross/
American Red Cross "What's New?"

In support of FEMA's Project Impact and disaster reduction, the American Red Cross's Mitigation and Community Disaster Preparedness Unit publishes "What's New - Mitigation and Preparedness Activities Across the Country." This newsletter is available in PDF format; you will need ACROBAT to read these files. Click on the "News" button of the [Florida] Capital Area Chapter of the American Red Cross site to obtain a list of downloadable issues.

www.ericssonresponse.com/
The Ericsson Response

The Ericsson Corporation - specialists in advanced communication technology - has launched the Ericsson Response, a global initiative aimed at developing a better, faster response to human suffering caused by disasters. The initiative formalizes Ericsson's commitment to the issue based on its previous involvement and experience in various disaster response efforts throughout the world. This highly interactive Web site includes information and case studies, links to other resources, and forums for the development of new options, new ideas to improve response, lessons learned, and new technologies

Floods

www.egroups.com/group/Floodsystems
Floodsystems listserv

This list has been established for the community dedicated to reducing injuries, deaths, and property damage caused by floods.

Tornadoes

www.srh.noaa.gov/oun/papers/overpass.html
Highway Overpasses as Tornado Shelters:
Fallout From the 3 May 1999 Oklahoma/Kansas
Violent Tornado Outbreak

This National Severe Storms Laboratory and National Weather Service report on the effectiveness of using the undersides of highway overpasses as shelters from tornadoes and other severe storms concludes that the public has wrongly identified such areas as appropriate shelters. In fact, they are extremely dangerous places in which to hide, and the public should be educated about the danger of such shelters.

Summer/Winter

www.nws.noaa.gov/om/winter/index.html
Winter Weather Awareness

This NWS Office of Meteorology site provides information about actions you can take to protect yourself, family, pets, and property from winter hazards such as snow, ice, strong winds, and wind chill. Information about how to respond to winter weather is also included

About Us

WeatherZine is a bimonthly newsletter on the societal aspects of weather. It contains opinion pieces, news, and a brief summary of developments at the *Societal Aspects of Weather* Web site.

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Subscription Information

The *WeatherZine* is produced both as both a Web page and an email message. Subscribing to the *WeatherZine* will add you to our distribution list and you will receive email messages whenever the *WeatherZine* is released.

To submit an item to the *WeatherZine*, use the on-line form at:
www.esig.ucar.edu/socasp/forms/join.html
or send email to thunder@ucar.edu, and include the following information:

Name
Organization
Email Address
Interests & Needs

For additional information, please contact the webmaster at oxelson@ucar.edu