# 2AC

### T

#### First, we meet their interpretation: [explain]

#### Second, counter-interpretation: a reduction is eliminating duplicative restrictions requiring environmental reviews

#### reduce is to bring down in extent or amount

American Heritage Dictionary 9

<http://dictionary.reference.com/browse/reduce>.

To bring down, as in extent, amount, or degree; diminish.

#### B- The status quo has multiple sets of duplicative NEPA restrictions

Weber 7

[Lucas, no qualifications available, published on WindPower.net- the North American Offshore Wind Power Information Project, “Offshore Wind Energy Permitting”, May 10, p. online//wyo-tjc]

The Cape Wind Project provides the perfect illustration of this misuse of the NEPA environmental review process. This project has already undergone more than four years of rigorous environmental review, beginning with the Army Corps of Engineers in 2001. Nearly three years after submitting an application to the Corps, a Draft EIS was finally issued in 2004.130 Despite the fact that the Corps’ Draft EIS was 4,000 pages, the MMS did not find it to be comprehensive enough and, as the newly appointed lead agency, demanded another Draft EIS be completed under its supervision.131 The Final EIS is not expected to be issued until Fall of 2007 and the Record of Decision is not expected until Winter of 2007.132 In all, the Cape Wind Project will have undergone more than six years of environmental review.

This unreasonable delay runs contrary to the intended use of the NEPA environmental review process. According to the regulations, an EIS “shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages.”133 Accordingly, the Council on Environmental Quality (CEQ), the agency charged with overseeing NEPA’s implementation, has “advised that under the new NEPA regulations even large complex energy projects would require only about 12 months for the completion of the entire EIS process.”134 The Cape Wind Project’s 4,000-page Draft EIS and its six years of environmental review would seem to be evidence that the process has gotten out of control.

Thus, the NEPA process has been converted into a tool for blocking the development of offshore wind energy. The MMS needs to rein in this environmental review process and honor the intention of NEPA. Based on the decision-making process that NEPA mandates, the choice of whether to permit the proposed projects should be easy for the agency to make.135

#### Third, we meet- we reduce the NEPA restriction on wind production

Russell 9

[Irma S., Dean and Professor, University of Montana School of Law, Streamlining NEPA to Combat Global Climate Change: Heresy or Necessity?, Lewis and Clark Law School’s Environmental Law Online, p. <http://www.elawreview.org/elaw/394/streamlining_nepa_to_combat_gl.html> //wyo-tjc]

The National Environmental Policy Act (NEPA)[4] requires federal agencies to consider the environmental impacts of major projects they undertake. It added to each agency's mission the additional requirement of considering the effects on the environment of federal projects.[5] To achieve its goal, NEPA mandates that "all agencies of the Federal Government . . . utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on man's environment."[6] NEPA's policy seeks to foster conditions "under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."[7] NEPA has made significant changes in the way federal agencies go about achieving their missions.[8] Fulfilling the procedural requirements of NEPA takes time and money.[9]

NEPA results in delays in virtually all major energy projects. It applies to projects requiring federal permits because permitting requirements make energy projects federal agency actions under NEPA.[10] Thus, NEPA applies to traditional energy projects such as coal-fired utilities and, additionally, to energy projects aimed at supplying energy without the GHGs associated with combustion, such as concentrated solar installations, wind farms, and wave technology. The global climate crisis raises the question of whether the NEPA process is too slow. Should Congress streamline NEPA to bring clean power online faster? The argument for streamlining NEPA is that the intensity of global climate change makes rapid transition to clean energy a necessity. This argument suggests that a categorical approach to siting and licensing of clean energy resources may be a necessary step in the move toward greening the grid. Any reduction or shortening of the NEPA process is likely to be regarded as heresy by some. The benefits of shortening the timeframe or process for input in any major federal project must be scrutinized.

#### Fourth, prefer our interpretation:

#### Predictability- the NEPA process is the single largest restriction on production- it is common to every energy type and every agency.

#### Education- consolidating agency review processes exposes us to unique education that hasn’t been covered on other energy topics.

#### Fifth, their interpretation is bad: insert

#### Sixth, counter-interpretation: reduce is to make less complex

WordNet 8

<http://www.thefreedictionary.com/reduce>.

make less complex; "reduce a problem to a single question"

#### Seventh, we meet- plan creates a one-stop agency for OSW permitting.

#### Eighth, Err affirmative—the topic is massively neg-biased because of a lack of fed-key warrants and the states counterplan, and huge backfile generics because of past energy topics

#### Ninth, Competing interpretations is bad—comparisons are just as subjective as reasonability and their frame encourages a race to the bottom. We shouldn’t lose if our aff makes debate harder as long as it is still possible and educational.

### Warming

#### Warming is reversible, even if we temporarily cross a tipping point—inertia

Dyer 9

[Gwynne, MA in Military History and PhD in Middle Eastern History former @ Senior Lecturer in War Studies at the Royal Military Academy Sandhurst, Climate Wars //Wyo-BF]

There is no need to despair. The slow-feedback effects take a long time to work their way through the climate system, and if we could manage to get the carbon dioxide concentration back down to a safe level before they have run their course, they might be stopped in their tracks. As Hansen et al. put it in their paper: A point of no return can be avoided, even if the tipping level [which puts us on course for an ice-free world] is temporarily exceeded. Ocean and ice-sheet inertia permit overshoot, provided the [concentration of carbon dioxide] is returned below the tipping level before initiating irreversible dynamic change.... However, if overshoot is in place for centuries, the thermal perturbation will so penetrate the ocean that recovery without dramatic effects, such as ice-sheet disintegration, becomes unlikely. The real, long-term target is 350 parts per million or lower, if we want the Holocene to last into the indefinite future, but for the remainder of this book I am going to revert to the 450 parts per million ceiling that has become common currency among most of those who are involved in climate change issues. If we manage to stop the rise in the carbon dioxide concentration at or not far beyond that figure, then we must immediately begin the equally urgent and arduous task of getting it back down to a much lower level that is safe for the long term, but one step at a time will have to suffice. I suspect that few now alive will see the day when we seriously start work on bringing the concentration back down to 350, so let us focus here on how to stop it rising past 450.

#### Clouds are actually a positive feedback, not a negative one

Johnston 09

(Hamish Johnston is an editor at Physics World. “Cloud feedback could accelerate global warming” July 23, 2009. http://physicsworld.com/cws/article/news/2009/jul/23/cloud-feedback-could-accelerate-global-warming//wyoccd)

Low-level clouds are involved in a positive feedback mechanism that could exacerbate global warming — according to a study of cloud and temperature records from the north-eastern Pacific Ocean. Scientists in the US have found that low-level cloud cover decreases when the sea surface gets warmer. Fewer clouds mean that more sunlight reaches Earth’s surface, leading to further warming. Understanding how climate change is affected by low-level clouds is one of the key challenges facing climate scientists. Such clouds are known to have a net cooling effect — so if rising temperatures lead to more low-level clouds, this negative feedback mechanism could mitigate global warming. But if higher temperatures lead to fewer clouds, the feedback is positive and global warming could be enhanced. Observational data linking low-level cloud cover and temperature are scarce and the formation and dissipation of clouds is notoriously difficult to model and integrate into global climate simulations. Now, Amy Clement and Robert Burgman of the University of Miami and Joel Norris of the University of California-San Diego have done a statistical analysis of 55 years of cloud cover and temperature observations for the north-eastern Pacific Ocean. Their study provides the best evidence yet that low-level cloud cover decreases as temperature increases — that the feedback mechanism is positive. Wrong type of clouds When temperatures are higher, Clement believes that water rises higher into the atmosphere to create upper-level clouds at the expense of low-level clouds. These higher clouds, however, have a net greenhouse effect and therefore their creation could further boost the positive feedback. The team compared their findings with feedback predictions made by 18 leading climate models. Only two models predicted a positive feedback and one of these — HadGEM1 from the UK’s Hadley Centre — was particularly good at reproducing the observed relationships between cloud cover, atmospheric circulation and temperature. Clement believes HadGEM1 performed well because Hadley scientists have “spent a lot of time looking at the lower kilometre of the atmosphere”. Clement told physicsworld.com that the strength of the positive feedback is in the upper range of that predicted by the Intergovernmental Panel on Climate Change (IPCC). An important consequence of this is that global warming could be worse than many scientists had anticipated. Indeed, HadGEM1 predicts a 4.4° average global temperature increase when carbon dioxide is doubled — compared to the 3.1° median of the 18 models. A perfect 'laboratory' The team focused on the north-eastern Pacific Ocean because the average temperature in the region fluctuates significantly on a ten-year timescale — and because comprehensive cloud-cover observations have been made over the years by satellites as well as by the many ships that sail through the region. This makes it a perfect "laboratory" for studying the relationship between clouds and temperature. Clement says that it is possible that the observed feedback is specific to the north-eastern Pacific and may be different in other parts of the world where there is significant low-level cloud cover. To test this, the team is now doing a similar study of data from the south-eastern Pacific. Matthew Collins of the Hadley Centre said that the result sheds significant light on the role of clouds and will be used to evaluate and improve the performance of climate models. However, he cautions that cloud feedback is only part of the picture — and the type of clouds studied by Clement and colleagues are significant only in certain parts of the globe.

#### Current models are built on a various submodels, but all are built on solid science which produces accurate readings

Kourentzes 11

(Nikolaos Kourentzes is an assistant professor at Lancaster University and a researcher at the Lancaster Centre for Forecasting. He is currently at the department of Management Science at Lancaster University Management School, UK. “Validation and forecasting accuracy in models of climate change” October 2011. http://www.sciencedirect.com/science/article/pii/S0169207011000604//wyoccd)

The models at the heart of the IPCC report, while differing in the details, are all examples of Coupled Atmospheric-Ocean General Circulation Models (AOGCMs).4Müller (2010) provides a recent view of their construction and use in both scientific endeavour and policy which is compatible with our own more extended discussion. A brief summary of their basis is as follows. They are systems of partial differential equations based on the basic laws of physics, fluid motion, and chemistry. To ‘run’ a model, scientists divide the planet into a 3-dimensional grid plus time, apply the basic flow equations to calculate winds, heat transfers, radiation, relative humidities, ocean temperatures and flows, and the surface hydrology within each grid cell, then evaluate the interactions with neighboring points. The outputs include temperature and precipitation estimates across the grid, as well as many other variables, and these are averaged to produce such publicly high profile outputs as the ‘average global temperature’. The inputs (termed ‘boundary conditions’ by climate modelers) include emissions of atmospheric gases (including CO2) and volcanic eruptions. A crucial intermediate variable is the concentration of CO2. Fig. 1 shows a stylised representation of such models.The initial conditions and parameters must be set to solve the partial differential equations at the heart of the model numerically. The initial conditions are fixed, depending on the starting point of the runs, which are often many hundreds of years in the past. At that distance in the past, the observations are limited (from measures such as ice cores), and therefore the starting values are based on plausible assumed pre-industrial states (Meehl et al., 2009). The parameters in the GCM are based on physical (sub)models, which sometimes determine a parameter exactly, while on other occasions the model used is a simplified abstraction. Alternatively, they may be ‘tuned’ (estimated or calibrated, in forecasting terminology), whilst remaining compatible with prior information and established physical relationships, so that the outputs of the simulation ‘fit’ particular observed outputs and spatial relationships

(data assimilated,5 in climate modeling terms). The aim is to provide a ‘best’ estimate of the true state of the world’s climate system, and corresponding prediction equations both for simulating recent climate history and for forecasting. The start-up runs typically drift, so that by the time data are more readily available, there is often a discrepancy between the observed and simulated outputs. Further tuning is then used to ensure that the model is back on track (e.g., “to deduce the ocean-heat flux convergence field”, see Stainforth et al., 2005). In addition, from approximately 1850, observed data on ‘forcing’, namely exogenous variables (in statistical terminology; known as boundary conditions in climate science), such as CO2 and volcanic emissions, are included as well. Other potentially relevant variables such as land use changes are usually excluded. Because of the complexity of such models, the computer costs of optimizing these steps are currently prohibitive. Even if it were feasible, given the large number of degrees of freedom and the limited observations, it is necessary to use judgment. Thus, a major part of the model building is judgmental (Stainforth, Allen, Tredger, & Smith, 2007). With the model ‘on-track’, the prediction equations roll out the current system states over time to deliver forecasts of many variables across time and space, of which there are a number that are regarded as being key to a good model performance. Climate modellers draw a distinction between long-term (100+ years ahead) prediction and decade-ahead predictions. In the former task, “the climate models are assumed to lose all memory of their initial conditions” (Haines et al., 2009), and thus, current observations are not usually used to ground (or ‘assimilate’) the model in the data (although research is currently being conducted in this area). Note that the observed data correspond to only a small sub-set of the GCM’s output. For decade-ahead forecast horizons, the recent conditions matter, so that, to produce plausible forecasts, the models must be rendered compatible with the current observations (through data assimilation; see Mochizuki et al., 2010, for an example). For the IPCC forecasts,6 this has not been done, since they focus primarily on the longer term. Recently, various modelling exercises have focussed, for reasons which we have already explained, on decadal prediction ( [Haines et al., 2009], [Meehl et al., 2009] and [Smith et al., 2007]). The forecasts from the GCMs use the observations at the forecast origins as their initial values, as we explain in greater detail in Section 3. The prevalent research strategy in the climate-modelling community has been characterised by Knutti (2008), himself a climate modeller, as “take the most comprehensive model …, run a few simulations …at the highest resolution possible and then struggle to make sense of the results”. The aim is to produce models which are as “realistic as possible” (Beven, 2002). However, various models of sub-systems (e.g. Earth Systems Models of Intermediate Complexity (EMICs)) have been constructed to deliver simpler models that are more manageable. See Claussen et al. (2002) for a discussion of a “spectrum of climate system models” which differ as to their complexity, but with AOGCMs at the extreme.

#### Center for Study of CO2 and Global Change—home of the Idso boys—is tied to pro-fossil fuel interests

Headen 98

[Emily, (CLEAR analyst) Clearinghouse on Environmental Advocacy and Research, “Western Fuels Association’s Astroturf Empire: Coal Industry Campaign Multiplies Effort to Re-spin Global Warming,” 11/10/98 [www.ewg.org/pub/home/clear/westernfuels.html //wndi03](http://www.ewg.org/pub/home/clear/westernfuels.html%20//wndi03)]

The Center "was created to disseminate factual reports and sound commentary on new developments in the world-wide scientific quest to determine the climactic and biological consequences of the ongoing rise in the air's CO2 content" (From mission statement. www.co2science.org) The Center is run by Sherwood Idso's sons, Craig (President) and Keith (Vice President). Sherwood sits on the Scientific Advisory Board along with Sylvan Wittwer of the Greening Earth Society. Other scientific advisors are Donald Baker, Edwin Olson, William Reifsnyder, Paul Reiter, and Kenneth E.F. Watt. According to the Arizona State University Web Directory, Craig Idso is currently a Graduate Research Associate at the Office of Climatology at ASU, a project run by Robert Balling, who is associated with two Western Fuels projects, the Greening Earth Society and the World Climate Review. It must be stressed that there is currently no evidence to indicate financial support of the Center by Western Fuels or Greening Earth, but there is plenty of circumstantial evidence that at the very least a working relationship exists. Both Idso brothers have been on the Western Fuels payroll at one time or another. Keith Idso, then a doctoral candidate at the University of Arizona, was a paid expert witness for Western Fuels Association at a 1995 Minnesota Public Utilities commission hearing in St. Paul, along with MIT's Richard Lindzen, Patrick Michaels, and Robert Balling. (The Heat is On). According to news from Basin Electric, a Western Fuels Association member, Craig Idso produced a report, "The Greening of Planet Earth Ñ Its Progression from Hypothesis to Theory," in January 1998 for the Western Fuels Association. (The Center also came into being in January 1998, according to information provided by the Center). Fred Palmer of Western Fuels had nothing but praise for the Idso brothers at the release of the report, "They (Craig and Keith Idso) each are providing valuable service to the army of scientists at work in this important, though often overlooked, field of inquiry." (Basin Electric Latest News no date given) Additionally, Greening Earth Society issued a press release announcing The Center's web site on September 23, 1998. In the release, Fred Palmer, under the auspices of GES said, "The Center's viewpoint is a needed antidote to the misleading and usually erroneous scientific claims emanating from the Federal scientific establishment and adopted by leading politicians, such as Vice President Al Gore." The only contact information for The Center was the web address, and GES's Ned Leonard was listed as the sole phone contact on the press release. There is no information about sponsorship or funding on The Center's web site.

#### Food shortages don’t cause war

Chang 11

(Gordon G Chang, Graduated Cornell Law School, Lawyer and writer and former trustee of Cornell, “Global Food Wars,” Forbes, 2/21/11 <http://blogs.forbes.com/gordonchang/2011/02/21/global-food-wars/>)

In any event, food-price increases have apparently been factors in the unrest now sweeping North Africa and the Middle East. The poor spend up to half their disposable income on edibles, making rapid food inflation a cause of concern for dictators, strongmen, and assorted autocrats everywhere. So even if humankind does not go to war over bad harvests, Paskal may be right when she contends that climate change may end up altering the global map. This is not the first time in human history that food shortages looked like they would be the motor of violent geopolitical change. Yet amazing agronomic advances, especially Norman Borlaug’s Green Revolution in the middle of the 20th century, have consistently proved the pessimists wrong. In these days when capitalism is being blamed for most everything, it’s important to remember the power of human innovation in free societies—and the efficiency of free markets.

### Politics

#### Congress supports wind—PTC and ITC prove

Pasolini 4 Jan

[Pasolini, Antonio: alternative energy, green living, and sustainability journalist. "Congress extends tax credit for sustainable wind energy in 2013." *Just Means*. Just Means, 4 Jan 2013. Web. 8 Jan 2013. <http://www.justmeans.com/Congress-extends-tax-credit-for-sustainable-wind-energy-in-2013/57325.html>. //Wyo-BF]

After a long campaign by wind energy stakeholders, Congress has included the extension of wind energy tax credits in final passage of a bill to avert the "fiscal cliff" that now moves to President Obama for his expected signature. Half of the American jobs in wind energy, or 37,000 out of 75,000, and hundreds of U.S. factories in the supply chain, would have been at stake had the Production Tax Credit (PTC) been allowed to expire, according to a study by Navigant Consulting. The news was welcomed by the wind energy sector as the continuation of policies are expected to save jobs as well as revive business at nearly 500 manufacturing facilities across the country. The American Wind Energy Association said the extension of the PTC and Investment Tax Credits for community and offshore projects will keep the momentum for the industry, which installed the most new electrical generating capacity in America during 2012, with factories or wind farms in all 50 states. Wind set a new record in 2012 by installing 44 percent of all new electrical generating capacity in America, according to the Energy Information Administration, leading the electric sector compared with 30 percent for natural gas, and lesser amounts for coal and other sources. The version included in the deal covers all wind projects that start construction in 2013. Companies that manufacture wind turbines and install them sought that definition to allow for the 18-24 months it takes to develop a new wind farm. Leaders of the Senate Finance Committee included that version in a "tax extenders" package they assembled in August, which made it into the overall fiscal cliff deal that passed the Senate on January 1st and the House on the evening of that same day. The bill is expected to be swiftly signed into law by President Obama, who is a supporter of wind energy tax credits.

#### Obama has zero leverage in the debt ceiling fight---PC’s irrelevant

Joshua Holland 1-1

editor and senior writer at AlterNet, 1/1/13, “What the Fiscal Cliff Deal Was Really About,” http://www.alternet.org/print/election-2012/what-fiscal-cliff-deal-was-really-about

It's simply a hostage exchange. The Republicans gave up the fiscal cliff, and will now take the debt limit, the federal budget and automatic across-the-board cuts to discretionary spending (the sequester), and have another standoff in 2-3 months time. The deal wouldn't have gotten 85 GOP votes in the House without the leadership giving right-wingers ironclad guarantees that they'll have another hostage soon. ¶ What leverage will the White House have at that point? They've already rejected the "constitutional option" to avoid the debt ceiling -- and won't mint a big platinum coin [4]. The Bush tax cuts on high earners will be off the table. That leaves cuts to defense -- which Republicans hate -- and public opinion, to which the GOP doesn't seem terribly responsive when its base is screaming murder and threatening primaries (which is always). That's pretty thin gruel given that the "austerity caucus" thinks it has a good shot at cutting Social Security and Medicare as part of a "grand bargain" with Obama. ¶ Other than that, we'll only have the Democrats' legendary iron back-bone on which to rely. Nobody's ever gotten rich betting on that.

#### Hagel nomination costs the agenda.

Ryan Lizza, The New Yorker’s Washington correspondent. He covers the 2012 Presidential campaign and national politics,” WILL HAGEL SPIKE THE G.O.P.’S FEVER?”, 1/7/2013. http://www.newyorker.com/magazine/bios/ryan\_lizza/search?contributorName=Ryan%20Lizza&currentPage=all#ixzz2HP2N6pD5

There simply isn’t much common ground between Obama and most House Republicans on the agenda he’s chosen. On every front, Obama is challenging the G.O.P.’s most intransigent interest groups. He’s taking on the anti-tax activists who have controlled Republican economic thinking for decades. He’s taking on the Republicans’ Tea Party base over immigration, an issue that polls (and the Republican Presidential primaries) have shown to be more intense than almost any other for grassroots conservatives. He’s taking on the previously untouchable National Rifle Association with his coming proposals to regulate firearms.¶ And with today’s nomination of Hagel, Obama will open a new front against Republican neoconservatives, who control foreign policy in the G.O.P. It’s doubtful that the votes to defeat Hagel will materialize in the Senate, but a President’s political capital, especially in a second term, depletes quickly after his election. Even if Obama prevails, the Hagel fight will have a cost to the rest of his agenda.¶ The past few weeks have made clear that none of these policy battles were settled by the election. If anything, Obama’s victory may have caused the fever to spike.

#### Offshore wind is bi-partisan

NAW, 11

North American Wind “New Bipartisan Legislation Proposes Offshore Wind Energy Tax Credit” <http://www.nawindpower.com/e107_plugins/content/content.php?content.8790>, accessed 11/7/12,WYO/JF

U.S. Reps. Bill Pascrell Jr., D-N.J., and Frank LoBiondo, R-N.J., [have introduced](http://pascrell.house.gov/list/press/nj08_pascrell/pr101820112.shtml) bipartisan legislation to encourage offshore wind power investment off the coast of New Jersey. The Incentivizing Offshore Wind Power Act (H.R.3238) proposes to provide a 30%tax credit on investment in the first 3,000 MW of offshore wind. The secretary of the Treasury would have to consult with the secretaries of Energy and the Interior when establishing this credit.

#### The economy is resilient

Lambro 8

- chief political correspondent of The Washington Times (7/28/08, Donald Lambro, The Washington Times, "Always darkest before dawn", lexis)

**The doom-and-gloomers are still with us, of course, and they will go to their graves forecasting that life as we know it is coming to an end and that we are in for years of economic depression and recession**. Last week, the New York Times ran a Page One story maintaining that Americans were saving less than ever, and that their debt burden had risen by an average of $117,951 per household. And the London Telegraph says there are even harder times ahead, comparing today's economy to the Great Depression of the 1930s. Wall Street economist David Malpass thinks **that kind of fearmongering is filled with manipulated statistics that ignore long-term wealth creation in our country, as well as globally**. Increasingly, **people are investing "for the long run** - for capital gains (not counted in savings) rather than current income - in preparation for retirement," he told his clients last week. **Instead of a coming recession, "we think the U.S. is in gradual recovery after a sharp** two-quarter **slowdown, with** consumer **resilience more likely than the decades-old expectation** of a consumer slump," Mr. Malpass said. "**Fed data shows clearly that** household **savings** of all types - liquid, financial and tangible - **are** still **close to** the **record levels** set in September. IMF data shows U.S. households holding more net financial savings than the rest of the world combined. **Consumption** **has** repeatedly **outperformed expectations in recent quarters** and year," he said. **The American economy has been pounded by a lot of factors**, including the housing collapse (a needed correction to bring home prices down to earth), the mortgage scandal and the meteoric rise in oil and gas prices. **But this $14 trillion economy**, though slowing down, **continues to grow** by about 1 percent on an annualized basis, confounding the pessimists who said we were plunging into a recession, defined by negative growth over two quarters. That has not happened - yet. Call me a cockeyed optimist, but I do not think we are heading into a recession. On the contrary, I'm more bullish than ever on our economy's long-term prospects.

### Ice Age

#### Warming shuts down North Atlantic Current and causes European ice age—destroys agriculture and civilization. Can’t solve warming causes their impacts.

Lean 04

[Geoffrey, (environmental editor) “Global Warming will Plunge Britain into New Ice Age ‘Within Decades’,”1/25/04 Independent, LN//mac-dch]

Britain is likely to be plunged into an ice age within our lifetime by global warming, new research suggests. A study, which is being taken seriously by top government scientists, has uncovered a change "of remarkable amplitude" in the circulation of the waters of the North Atlantic. Similar events in pre-history are known to have caused sudden "flips" of the climate, bringing ice ages to northern Europe within a few decades. The development - described as "the largest and most dramatic oceanic change ever measured in the era of modern instruments", by the US Woods Hole Oceanographic Institute, which led the research - threatens to turn off the Gulf Stream, which keeps Europe's weather mild. If that happens, Britain and northern Europe are expected to switch abruptly to the climate of Labrador - which is on the same latitude - bringing a nightmare scenario where farmland turns to tundra and winter temperatures drop below -20C. The much-heralded cold snap predicted for the coming week would seem balmy by comparison. A report by the International Geosphere-Biosphere Programme in Sweden - launched by Nobel prize-winner Professor Paul Crutzen and other top scientists - warned last week that pollution threatened to "trigger changes with catastrophic consequences" like these. Scientists have long expected that global warming could, paradoxically, cause a devastating cooling in Europe by disrupting the Gulf Stream, which brings as much heat to Britain in winter as the sun does: the US National Academy of Sciences has even described such abrupt, dramatic changes as "likely". But until now it has been thought that this would be at least a century away. The new research, by scientists at the Centre for Environment, Fisheries and Acquaculture Science at Lowestoft and Canada's Bedford Institute of Oceanography, as well as Woods Hole, indicates that this may already be beginning to happen. Dr Ruth Curry, the study's lead scientist, says: "This has the potential to change the circulation of the ocean significantly in our lifetime. Northern Europe will likely experience a significant cooling." Robert Gagosian, the director of Woods Hole, considered one of the world's leading oceanographic institutes, said: "We may be approaching a threshold that would shut down [the Gulf Stream] and cause abrupt climate changes. "Even as the earth as a whole continues to warm gradually, large regions may experience a precipitous and disruptive shift into colder climates." The scientists, who studied the composition of the waters of the Atlantic from Greenland to Tierra del Fuego, found that they have become "very much" saltier in the tropics and subtropics and "very much" fresher towards the poles over the past 50 years. This is alarming because the Gulf Stream is driven by cold, very salty water sinking in the North Atlantic. This pulls warm surface waters northwards, forming the current. The change is described as the "fingerprint" of global warming. As the world heats up, more water evaporates from the tropics and falls as rain in temperate and polar regions, making the warm waters saltier and the cold ones fresher. Melting polar ice adds more fresh water. Ominously, the trend has accelerated since 1990, during which time the 10 hottest years on record have occurred. Many studies have shown that similar changes in the waters of the North Atlantic in geological time have often plunged Europe into an ice age, sometimes bringing the change in as little as a decade. The National Academy of Sciences says that the jump occurs in the same way as "the slowly increasing pressure of a finger eventually flips a switch and turns on a light". Once the switch has occurred the new, hostile climate, lasts for decades at least, and possibly centuries. When the Gulf Stream abruptly turned off about 12,700 years ago, it brought about a 1,300-year cold period, known as the Younger Dryas. This froze Britain in continuous permafrost, drove summer temperatures down to 10C and winter ones to -20C, and brought icebergs as far south as Portugal. Europe could not sustain anything like its present population. Droughts struck across the globe, including in Asia, Africa and the American west, as the disruption of the Gulf Stream affected currents worldwide. Some scientists say that this is the "worst-case scenario" and that the cooling may be less dramatic, with the world's climate "flickering" between colder and warmer states for several decades. But they add that, in practice, this would be almost as catastrophic for agriculture and civilisation.

#### Ocean disruptions causes agricultural shortfalls and world war

Calvin ‘91

[William, (researcher) Whole Earth Review, n. 73 p. 110]

But non-Europeans are vulnerable too, and not just those along the eastern shores of North America (and elsewhere around the world where repercussions of the Younger Dryas have been detected). Abrupt and widespread agricultural shortfalls in densely populated technological societies tend to suggest lebestraum-style global conflict. Affected populations will initially switch (as they have during brie droughts of the past) to themselves eating the feed grains that now produce meat at 20 percent efficiency – but remember how poorly an economic response worked for Ireland in the nineteeth-century famine. Another cold spike need not endure for 800 years to exhaust stockpiles and people’s patience. Just imagine any country affected by the North Atlantic Current contemplating starvation – while possessing the military technology needed to takeover another country (which will undoubtedly be described by the aggressors as “irresponsibly squandering its agricultural potential while others starve”).

#### Warming could cause the climate to “snap” into a quick ice age

Gelbspan ‘97

(Ross, Pulitzer Prize Winner, frmr editor and reporter of Boston Globe, Village Voice, The Heat is On: The Climate Crisis, The Cover Up, The Prescription, 1997, pg. 30-31//wyo-ef)

The worst possible consequences of global warming involve more than an alteration in the seasons or even a steady increase in global temperatures. The scientists' most cataclysmic, if improbable, scenario is based on paleontological records culled from ocean sediments and ice-core samples from glaciers. Until recently, scientists believed the transitions between ice ages and more moderate climatic periods had occurred gradually, over several centuries. No longer. Ancient ice cores are made of annual layers of frozen water, which hold natural records of our ancient atmosphere. Several years ago researchers examining them found that those ice age transitions, involving temperature changes of up to 10 degrees Celsius, occurred within the space of only ten years-a virtual millisecond in geological time. In the last 70,000 years, they learned, the earth's climate has snapped-\_abruptly and dramatically-into radically different temperature regimes. "Our results suggest that the present climate system is very delicately poised," said Scott Lehman, a researcher at the Woods Hole Oceanographic Institution, announcing findings in 1993. "The system could snap suddenly between very different conditions with an abruptness that is scary. It's a strongly non-linear response, meaning shifts could happen very rapidly if conditions are right, and we cannot predict when that will occur. Our studies tell us only that when a shift occurs, it could be very sudden." In an interview with The Boston Globe he added, "You don't want to push your luck by perturbing the system. A small effect might produce a major change." Lehman's cautionary tone is underscored by findings that the end of the last ice age, some 10,000 years ago, was marked by a series of extreme oscillations between warming spikes and severe regional deep freezes. As the surface waters of the North Atlantic warmed, the Woods Hole team found, rising temperatures triggered snowmelts in the Arctic and increased rainfall in the northern latitudes. That infusion of fresh water diluted the salt content of the ocean, which, in turn, changed the course of the deep-ocean warming current from a northeasterly direction to one that ran nearly due east. Should such an episode occur today, the researchers concluded, "the present climate of Britain and Norway would change suddenly to that of Greenland and Northern Canada."

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#### No compromise coming now

Boston Globe, 1/7

Lawmakers remain stubborn on debt stances Veiled threats, accusations greet next crisis, http://bostonglobe.com/news/nation/2013/01/07/lawmakers-dig-heels-debt-crisis/pOvrmWr0NqPhRdBZ9cSViL/story.html

Congressional leaders on Sunday showed no signs of resolving the next phase of the financial crisis, with Democrats still talking about higher taxes on the wealthy and the Senate’s top Republican suggesting that a crippling default on US [loans](http://bostonglobe.com/news/nation/2013/01/07/lawmakers-dig-heels-debt-crisis/pOvrmWr0NqPhRdBZ9cSViL/story.html) was possible unless there are significant cuts in government spending. ‘‘It’s a shame we have to use whatever leverage we have in Congress to get the president to deal with the biggest problem confronting our future, and that’s our excessive spending,’’ said Senator Mitch McConnell, Republican of Kentucky, who appeared on three network news shows Sunday Last week’s deal to avert the combination of end-of-year tax increases and spending cuts known as the ‘‘fiscal cliff’’ held income tax rates steady for 99 percent of Americans but left some other major pieces of business unresolved. By late February or early March, the Treasury Department will run out of options to cover the nation’s debts and could begin defaulting on [government loans](http://bostonglobe.com/news/nation/2013/01/07/lawmakers-dig-heels-debt-crisis/pOvrmWr0NqPhRdBZ9cSViL/story.html) unless Congress raises the legal borrowing limit, or debt ceiling. Economists warn that a default could trigger a global recession. Also looming are deep automatic spending cuts expected to take effect at the beginning of March that could further erase fragile gains in the US economy. Then on March 27, the temporary measure that funds government activities expires, and congressional approval will be needed to keep the government running. It’s one more chance to fight over spending Lawmakers said debt talks will consume Congress in the coming weeks, likely delaying any consideration of an expected White [House proposal](http://bostonglobe.com/news/nation/2013/01/07/lawmakers-dig-heels-debt-crisis/pOvrmWr0NqPhRdBZ9cSViL/story.html) on gun restrictions following the Connecticut school shooting. Republicans say they are willing to raise the debt ceiling but insist any increase must be paired with significant savings from [Medicare](http://bostonglobe.com/news/nation/2013/01/07/lawmakers-dig-heels-debt-crisis/pOvrmWr0NqPhRdBZ9cSViL/story.html), Medicaid and other government benefit programs. President Obama has said he’s willing to consider spending cuts separately but won’t bargain over the government’s borrowing authority.

#### Warming could cause the climate to “snap” into a quick ice age

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The worst possible consequences of global warming involve more than an alteration in the seasons or even a steady increase in global temperatures. The scientists' most cataclysmic, if improbable, scenario is based on paleontological records culled from ocean sediments and ice-core samples from glaciers. Until recently, scientists believed the transitions between ice ages and more moderate climatic periods had occurred gradually, over several centuries. No longer. Ancient ice cores are made of annual layers of frozen water, which hold natural records of our ancient atmosphere. Several years ago researchers examining them found that those ice age transitions, involving temperature changes of up to 10 degrees Celsius, occurred within the space of only ten years-a virtual millisecond in geological time. In the last 70,000 years, they learned, the earth's climate has snapped-\_abruptly and dramatically-into radically different temperature regimes. "Our results suggest that the present climate system is very delicately poised," said Scott Lehman, a researcher at the Woods Hole Oceanographic Institution, announcing findings in 1993. "The system could snap suddenly between very different conditions with an abruptness that is scary. It's a strongly non-linear response, meaning shifts could happen very rapidly if conditions are right, and we cannot predict when that will occur. Our studies tell us only that when a shift occurs, it could be very sudden." In an interview with The Boston Globe he added, "You don't want to push your luck by perturbing the system. A small effect might produce a major change." Lehman's cautionary tone is underscored by findings that the end of the last ice age, some 10,000 years ago, was marked by a series of extreme oscillations between warming spikes and severe regional deep freezes. As the surface waters of the North Atlantic warmed, the Woods Hole team found, rising temperatures triggered snowmelts in the Arctic and increased rainfall in the northern latitudes. That infusion of fresh water diluted the salt content of the ocean, which, in turn, changed the course of the deep-ocean warming current from a northeasterly direction to one that ran nearly due east. Should such an episode occur today, the researchers concluded, "the present climate of Britain and Norway would change suddenly to that of Greenland and Northern Canada."

#### Current crop stress proves that the trend will be harmful for ag, not beneficial

Chakraborty and Newton in 11

[Chakraborty, S.: Commonwealth Scientific and Industrial Research Organisation, and A. C. Newton: Scottish Crop Research Institute. "Climate change, plant diseases, and food security: an overview." *Plant Pathology*. 60.1 (2011): 2-14. Web. 10 Jul. 2012. <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3059.2010.02411.x/full>. //Wyo-BF]

The FAO estimated that 1·02 billion people went hungry in 2009, the highest ever level of world hunger, mainly as a result of declining investment in agriculture (Anonymous, 2010). It has been estimated that land degradation, urban expansion and conversion of crops and croplands for non-food production will reduce the total global cropping area by 8–20% by 2050 (Nellemann et al., 2009). This fact, combined with water scarcity, is already posing a formidable challenge to increase food production by 50% to meet the projected demand of the world’s population by 2050. Conditions will be even more difficult if climate change results in melting of portions of the Himalayan glaciers, disturbs the monsoon pattern and increases flooding/drought in Asia, as this will affect 25% of the world’s cereal production through increased uncertainty over the availability of water for irrigation and more frequent floods affecting lives and livelihoods. Total food production alone does not define food security since food must be both safe and of appropriate nutritive value. Furthermore, food has social values inseparable from the production, distribution and use value chain. Food must be accessible, affordable and available in the quantities and form of choice. This is dependent on production, distribution and trading infrastructure and mechanisms. All these factors may be affected by climate change, and some are affected both directly and indirectly through pest- and pathogen-mediated changes that occur because of climate change. A good example of these effects is illustrated in the case study of FHB, where changes in the pathogen complex affect crop yield, quality and safety, with consequent effects on trade and end-users, and therefore value and food security. Another example is the potato aphid–vector–parasite complex. Increased temperatures, particularly in early season, enable virus-bearing aphids to colonize seed potatoes earlier in northern Europe, thus contaminating the stocks and reducing their value for potato production (Robert et al., 2000). Aphids are predated by various other insects such as wasps and ladybirds, but whether predators will increase at similar rates to constrain the problem is not known. Furthermore, aphids are predominantly clonal in cooler northern latitudes and insecticide resistance can be monitored in these clones. Warmer climates favour sexual populations with increased variability and thereby resistance spread, which may exacerbate problems to growers (Malloch et al., 2006). Aphids themselves are dependent on specific microbes in their tissues, such as bacteria in their gut, which affect not only many fitness traits, but also their resistance to parasitoids and fungal pathogens (Ferrari et al., 2004), representing yet more trophic interaction complexes potentially differentially affected by climate change. How climate change may influence diseases of major field crops (Luck et al., 2011) and tropical and plantation crops (Ghini et al., 2011) are considered elsewhere.