

# WILL CLIMATE CHANGE BECOME NATIONAL SECURITY ISSUE BEFORE IT'S TOO LATE?

A significant list of serious national security figures (along with some not so serious people like Joe Lieberman, James Woolsey, and Frank Wisner) have released a letter calling for immediate focus on climate change.

The letter is not perfect. It still treats climate change as a force that will destabilize parts of the world, causing more headaches for us, rather than a force that will kill people directly.

Countries least able to adapt to or mitigate the impacts of climate change will suffer the most, but the resulting crises will quickly become a burden on U.S. priorities as well. Both the Department of Defense and the State Department have identified climate change as a serious risk to American security and an agent of instability. Without precautionary measures, climate change impacts abroad could spur mass migrations, influence civil conflict and ultimately lead to a more unpredictable world. In fact, we may already be seeing signs of this as vulnerable communities in some of the most fragile and conflict-ridden states are increasingly displaced by floods, droughts and other natural disasters. Protecting U.S. interests under these conditions would progressively exhaust American military, diplomatic and development resources as we struggle to meet growing demands for emergency international engagement.

It is in our national interest to

confront the risk that climate change in vulnerable regions presents to American security. We must offer adaptive solutions to communities currently facing climate-driven displacement, support disaster risk reduction measures and help mitigate potential future impacts through sustainable food, water and energy systems. Advancing stability in the face of climate change threats will promote resilient communities, reliable governance and dependable access to critical resources.

It still treats climate change as something that happens over there, not in New York or the midwest. It still treats climate change as a secondary issue.

Nor does it situate climate change against other threats, which pretty quickly shows that not only is climate change a more immediate threat than al Qaeda or China, but that its effects create conditions that foster the former.

But it's a start.

Until it becomes consensus that climate change is a national security threat, and must be treated with the same seriousness and intolerance with failure as any other national security threat, we're not going to a damn thing about it.

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**LAMAR SMITH: IT'S  
CRITICAL TO INVEST IN  
SPACE BALLS, BUT NOT**

# CLIMATE CHANGE

[Youtube]1x8MPKrdtTc[/youtube]

In reaction to last night's meteorite impact in Russia, Lamar Smith, who now chairs the Science, Space, and Technology Committee, has announced he will hold a hearing to ~~identify more pork for Houston's space industry~~ "examine ways to better identify and address asteroids that pose a potential threat to Earth."

Today's events are a stark reminder of **the need to invest in space science.**

Asteroid 2012 DA14 passed just 17,000 miles from Earth, less than the distance of a round trip from New York to Sydney. And this morning, a much smaller meteorite hit near the Russian city of Chelyabinsk, damaging buildings and injuring hundreds.

**Developing technology and research that enable us to track objects like Asteroid 2012 DA14 is critical to our future. We should continue to invest in systems that identify threatening asteroids and develop contingencies,** if needed, to change the course of an asteroid headed toward Earth.

Fifty years ago, we would have had no way of seeing an asteroid like this coming. Now, thanks to the discoveries NASA has made in its short history, we have known about 2012 DA14 for about a year. As the world leader in space exploration, America has made great progress for mankind. But our work is not done. We should continue to study, research, and explore space to better understand our universe and better protect our planet. [my emphasis]

So if you're a Republican, it is okay to invest in efforts to stop asteroids from hurdling to Earth (if they're going to hit us or an ally).

But not okay to invest in efforts to stop climate change from doing far more damage, far more frequently.

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## HOW CAN WE SAY JOHN BRENNAN “KEPT US SAFE”?

I was struck when I read this line in Dexter Filkin’s article on John Brennan and drones:

None of the above is intended as an attack on Brennan, who has spent the past four years as President Obama’s counterterrorism advisor. He has a hard job. He is almost always forced to act on the basis of incomplete information. His job is to keep Americans safe, and he’s done that.

How are we supposed to measure Brennan’s success in the White House?

His title, after all, is not just “Counterterrorism Advisor.” It is “Deputy National Security Advisor for Homeland Security and Counterterrorism.” Homeland Security **and** Counterterrorism.

As Counterterrorism Advisory Brennan deserves credit, I guess, as terrorism has declined from 2009 levels (2009 was a spike year). Though it’s unclear how much of that is organic, and how much a result of Brennan’s efforts. In any case, I’m certainly willing to give him credit on that front.

But say his Homeland Security mandate includes cyberdefense? If that’s true – and it was for Richard Clarke when he was in that job – then Brennan has most assuredly not kept us safe. We’re getting hacked more than ever and we have

yet to implement a comprehensive program that will keep critical infrastructure owned by corporations adequately defended.

Domestic terrorism is sort of included in Homeland Security. Indeed, Brennan has been involved in **responses to** mass shootings of both the domestic terrorist and non-terrorist varieties. If that's part of Brennan's mandate, than isn't the spiraling rate of mass gun shootings proof he has failed? How can Filkins say Brennan "kept us safe" after Newtown?

And then there are things that should be included under any Homeland Security mandate but aren't. Chief among them would be, at the very least, increasing resilience to extreme weather events, but preferably even efforts to minimize the risk of climate change. Hurricane response is included, and there are still people in NYC who lack heat from Hurricane Sandy. Drought badly damaged the navigability of the Mississippi this year; does our failure to resolve that problem count?

Infrastructure safety is another; some of the very same corporations that refuse to implement cybersecurity defenses have had major catastrophes caused simply by neglect (which suggests the push to get them to shore up only their cybersecurity defenses is a mistaken approach). How do we measure that?

Honestly, I'm as critical of Brennan as anyone, and I'm not sure it's fair to hold him accountable for all the Homeland Security lapses on his watch. After all (as this Congressional Research Service paper makes clear), we don't have a solid definition of what's included in Homeland Security. So until we define it clearly, no one can be held accountable to that fuzzy definition.

That said, we ought to, at least, be cognizant of the definitions those executing the mission use. This is actually even relevant assuming (as is almost certain) that Brennan is confirmed; there has been debate, after all, whether or not

CIA should be collecting intelligence on climate change. John Brennan prioritized his own work at the White House, and he appears not to have prioritized keeping first graders and Sikhs in their temple safe from crazy gunmen.

The point is, we as a country need to get better about defining what security for the “homeland” means, particularly because it is intended to include non-military defense. We need to shift our resources and emphasis accordingly based on what the greatest threats are. The fact that we don’t even know how Brennan defined that part of his job – and whether he was successful or not – tells us we’ve lost the big picture on our security.

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## **FAILED FILIBUSTER REFORM DOESN'T ONLY AFFECT PARTISAN RELATIONSHIPS**

As you’ve no doubt heard, Harry Reid, with the support of a handful of Senators, has killed the effort to reform the filibuster.

DDay has come out of retirement to issue an excellent rant on what this means for democracy. [Update] Here’s Kagro X on what the deal means in practice.

But I wanted to point to this exchange—between still-Senator John Kerry, who had been squeamish but open to reform, and Jim Risch, in the former’s confirmation hearing to become part of the Executive Branch. (1:25 and following)

Risch: I know you have a deep appreciation for the Constitutional process regarding foreign relations matters. There are a lot of us who are

becoming increasingly concerned about all this talk about Executive Agreements as opposed to treaties that are negotiated by the Executive Branch as contemplated by the Founding Fathers and ratified, if appropriate, by this committee and eventually by the full Senate. Can you give us your view on matters regarding Executive Agreements. How do you feel about that and the bypassing of the C-

Kerry: Well, every Administration in history,

Risch: Appreciate that.

Kerry: -Republican and Democratic alike, have entered into Executive Agreements.

Risch: You agree the better process would be to submit it to this committee first?

Kerry: It would depend-I would say to you Senator that it would depend on what the subject matter is and what the sort of scope is and whether or not it falls under traditional treaty purview or it falls under Executive Agreement purview. I can't, I don't want to be commenting in some prophylactic way, one side or the other, without the specific situation in front of me. But I'm confident the President is committed to upholding the Constitution I don't think he's ... you know, I think, I'll say this to all of you. There's no better way to guarantee that whatever concerns you have about the President's desire to move on an Executive Agreement would be greatly nullified or mollified if we could find a way to cooperate on a treaty or on the broader issues that face the nation. But, you know, I think **there's a lot of frustration out there that some of the automatic ideological restraint here that prevents the**

**majority from being able to express their voice** has restrained people and pushed people in a way that they have got to consider other ways of getting things done.

Risch: And that's exactly what concerns us, Senator Kerry, is the fact that it's okay to do this through the regular order if it gets done, but if it's not going to get done, the ends justify the means, it's okay to end run around the Congress. And I gotta tell you I feel strongly that that is not the appropriate way to do it. The Founding Fathers didn't say do this if it's convenient and it's okay not to do it if it's not convenient.

Kerry: Is that right. I would agree with you and I'm not suggesting that that is the standard. But I am saying to you—and I think you know exactly what I'm talking about— that there are times around here, in recent days only, and I don't want to get deeply into it, where certain arguments that are not necessarily based either on fact or on science or anything except the point of view of some outside entity have prevented certain things from being able to be done. [my emphasis]

Basically Jim Risch was objecting to Obama's consideration of using Executive Agreements with other countries rather than treaties. In response, Kerry suggested that if the Republicans didn't obstruct so much using the filibuster—preventing the majority from being able to express its voice—then Obama would be more likely to use Executive Agreements.

Frankly, Risch is defending not just the right of some right wing Senators to hold up treaties, but also some backassward policies. Kerry's nod to science suggests one of the issues here is in climate negotiations (though that's not the only



one—Obama is also avoiding Congress on some horrible IP negotiations). To the extent that national security is a reason to bypass Congress (it's not, but Republicans have argued it is), then climate change ought to qualify as well.

But Kerry—at almost precisely the moment Democrats chose not to pursue a way to bypass Republican obstruction and as part of the process to become part of the Executive Branch—used Republican obstruction as an excuse to bypass Congress.

And so the Democrat's refusal to make the Senate more democratic will, in turn, lead the Executive Branch to be even less democratic.

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## **TIME TO FUND FAT AL GORE RELIEF LIKE WE SHOULD HAVE FUNDED IRAQ, AFGHAN WARS**

Peter King, House Republican, called today for New Yorkers to stop funding House Republicans because they refused to pass a Sandy relief bill last night.

"These Republicans have no problem finding New York when they're out raising millions of dollars," King said on Fox News. "They're in New York all the time filling their pockets with money from New Yorkers. I'm saying right now, anyone from New York or New Jersey who contributes one penny to congressional Republicans is out of their minds. Because what they did last night was put a knife in the back of New Yorkers and New Jerseyans. It was an absolute disgrace."

King also said he was ready to buck Republican leaders on every issue until the Sandy aid is approved.

"As far as I'm concerned, I'm on my own," King said. "They're going to have to go a long way to get my vote on anything."

There's a lot of choice things to say about what this signals for the GOP and King.

But rather indulge myself in that, I'd like to draw a larger lesson from it.

It is time to start funding relief for climate change related disasters ahead of time—for all the reasons we should have always funded the Afghan and Iraq Wars through the budget rather than supplemental funding.

We need to start setting aside realistic relief funds—say \$100 billion a year—to deal with these disasters, because if we don't, these supplementals will become yet more hostage situations for the GOP. After all, while it was probably a fracking-related disaster rather than a climate change one, Eric Cantor held his own constituents hostage when they needed funds after the earthquake in his district. If Cantor will hold them hostage (and they'll continue to reelect him), then they'll hold anyone hostage. And if a city as big and vital as NYC can get held hostage, then the towns that extreme weather are wiping off the map in Arkansas and Alabama will surely be hostages, too.

We can't let increasingly frequent not-quite-so-natural disasters be serial opportunities for Republicans to gut government.

Furthermore, until we start budgeting climate change relief as such, we'll never start accounting for how much we're already paying because of climate change. We'll never adequately balance whatever benefits come from—say—Shell drilling in the Arctic or KXL pipeline transit of the US if, as we did with

the Iraq War, we simply don't treat relief for climate victims as a real cost, one we're going to have to pay year after year in increasing amounts.

Democrats are very happy to harp on Bush's wars, which were treated as but never really were free. But the government's commitment to drilling over better approaches to energy in the face of climate change—along with a failure to fund the obvious outcome of that drilling—is no less foolish.

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## **FUTURE FORECAST: ROUNDUP OF SCATTERED PROBABILITIES**

While thinking about forecasting the future, I collected a few short-term predictions for the year ahead worth kicking around a bit. After gazing deeply into my crystal ball, I added a few predictions of my own.

The National Weather Service's Climate Prediction Center at NOAA forecasts below-average precipitation in the Pacific Northwest along with higher than average temperatures in the Southwest through Summer 2013. Looks like rainfall across areas stricken by drought in 2012 might be normal, but this will not overcome the soil moisture deficit.

*My prediction: Beef, pork, and milk prices will remain high or increase – and that's before any weirdness in pricing due to changes in federal regulations after the so-called "fiscal cliff." And the U.S. government, both White House and Congress, will continue to do even less than the public expects when it comes to climate change.*

The European Commission predicted the UK will lead economic recovery in the EU with a meager 0.9% growth rate anticipated in 2013. The southern portion of the EU is expected to continue to struggle while the rest of the EU stagnates.

*My prediction: More mumbling about breaking up the EU, with just enough growth to keep at bay any action to that effect. Silvio Berlusconi will continue to provide both embarrassment and comedic relief to Italy and the EU. (What are they putting in that old freak's pasta? Or are they doping his hair color?)*

In September, the Federal Reserve Bank forecast slowish growth in the U.S. through 2013. Did they take into account the lame duck status of an already lethargic and incompetent Congress in this prediction? Did the Fed Reserve base this forecast on a Romney or an Obama win? This forecast seems oddly optimistic before November's election.

*My prediction: All bets are off now, since the over-long backbiting and quibbling over the so-called fiscal cliff has eroded public sentiment. Given the likelihood of increased food prices due to the 2012 global drought, the public will feel more pain in their wallet no matter the outcome of fiscal cliff negotiations, negatively affecting consumer sentiment. The only saving grace has been stable to lower gasoline prices due to lower heating oil demand—the only positive outcome of a rather warm winter to date.*

An analyst forecast Apple sales of iPads will equate nearly 60 percent of the total tablet market in 2013. As an owner of AAPL stock, I rather liked this. Unfortunately, that prediction was made in October, before the release of the iPad Mini. The stock market had something entirely different to say about the forecast—more like a bitchslap to the tune of nearly \$200 decline per share between October and year-end. \*Ouch!\* Not all of that was based on the market's rejection of the forecast on

iPad Mini sales, though; much of that fall was related to the gross failure of Apple's map application launched alongside the iPhone 5.

*My prediction: I will continue to bemoan the failure to sell some AAPL stock in September 2012, while many of you will continue to buy Apple products. I thank you buyers in advance for trying so hard to boost my spirits and bolster my kids' college fund in the coming year. Oh, and Google Maps will continue to eat at market share; it's going to be a while before Apple recovers from its epic map failures. Conveniently, there's GOOG stock in the kids' college fund, too.*

What about you? Are any of these predictions worth the pixels with which they're presented?

What do you predict for the year ahead? Do tell.

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## **US INTELLIGENCE COMMUNITY: STILL NOT GETTING IT ON CLIMATE CHANGE**

I'm going to have more to say about the Global Trends 2030 document in a few days. But for the moment I want to just point to what it says about climate change.

It considers climate change both a significant factor in one of its mega trends—"food, water, energy nexus" ("in combination with climate change," the report adds to this category in the body of the text but not the executive summary) and a potential Black Swan that could cause disruptive impact.

But (as previous National Intelligence Council documents also have done) it treats climate

change as something that will primarily affect the world by “aggravating” existing food and water scarcity, not by causing it (and not how cagey the language is, here avoiding naming climate change directly).

The increasing nexus among food, water, and energy— in combination with climate change—will have far-reaching effects on global development over the next 15-20 years. In a tectonic shift, demand for these resources will grow substantially owing to an increase in the global population from 7.1 billion today to 8.3 billion by 2030. As we have discussed, an expanding middle class and swelling urban populations will increase pressures on critical resources—particularly food and water—but new technologies—such as “vertical” farming in high-rise structures which also reduce transportation costs —could help expand needed resources. **Food and water security is being aggravated by changing weather conditions outside of expected norms.**

We are not necessarily headed into a world of scarcities, but policymakers and their private sector partners will need to be proactive to avoid scarcities in the future.

[snip]

Climate change impacts on food and water availability will vary widely by region and probably will be more limited in the period out to 2030 than in the decade after that. In the medium-term, atmospheric carbon rise is expected to boost carbon fertilization and thereby crop yields; however, the impact of climate change on extreme weather events (see box on page 32) probably will offset the positive effect on farming. Moreover, climate change analysis

suggests that average precipitation patterns will change such that wet areas will become wetter while dry, arid areas will become more so. Much of the decline in precipitation will occur in the Middle East and northern Africa, as well as western Central Asia, southern Europe, southern Africa and **the US Southwest**. [my emphasis]

This, written in a the richest country in the world, which produces more than any other country, yet in which a sixth of the population already faces food scarcity. And written in a country in which 60% of the country—including much of its less arid land—is facing a historic drought. It seems inconceivable after the last few years to see climate change affecting agriculture only in arid places.

And the focus seems to be exclusively on climate change's impact on agriculture, not society-disruptive events themselves. Consider the way it discusses rivers as sources for agriculture.

Recent scientific work shows that temperature anomalies during growing seasons and persistent droughts have lessened agricultural productivity. degraded agricultural productivity, when coupled with more protectionist national policies tightening global supply, undercuts food security, especially in impoverished regions.

Flows in the Nile, Tigris-Euphrates, Niger, Amazon, and Mekong river basins have been diminished by droughts that have persisted during the past decade. Although weather patterns in these regions are dominated by natural variability, these persistent droughts are consistent with the expected effects of warming from increased greenhouse gas concentrations in the atmosphere.

Flows have also been affected—through flood last year and drought this year—in the Mississippi. And the Great Lakes. And these flows have not just affected agriculture, but even more so, shipping. Yet, there's little attention to how climate change is literally reshaping the globe, which will have impacts beyond hunger.

And while it discusses how governance and climate change interact, with the “best case” (right column) being that rising powers (AKA China) may be prepared to make economic sacrifices, but it's “worst case” (central column) focuses only on the issue itself, not what happens when climate negotiations collapse, as the continue to do.

<b>Climate Change</b>	Annual meetings have failed to yield any new post-Kyoto comprehensive agreement.	Global economic slowdown makes it impossible for the US, China, and other major emitters to reach meaningful agreement. The result leaves UN-sponsored climate negotiations in a state of collapse, with greenhouse gas emissions unchecked.	Cheaper and more plentiful natural gas make emissions target easier to achieve, but so-called “two-degree” target would be unlikely to be met. As disparities between rich and poor countries decrease, rising powers may be more prepared to make economic sacrifices.
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Moreover, it doesn't seem to factor in how climate change itself, rather than food scarcity or some weather events (it includes Tsunamis but not floods), will challenge governance going forward. Bangladesh—one of the countries that faces the most daunting challenges because of climate—even does better than previously (though still quite badly) on the list of countries that might face collapse.

Then there's the Black Swan events. Some of the others include pandemic, collapsed EU or China, “reformed” Iran—all a collection of totally foreseeable events that demonstrate that these are not Black Swans at all, but predictable and possibly even likely events (and the fact it includes Iran on this list shows a bias towards the maintenance of current US hegemony, even while saying that won't sustain).

Here's what it says about climate change as a Black Swan.

**Much More Rapid Climate Change:** dramatic and unforeseen changes already are occurring at a faster rate than



expected. Most scientists are not confident of being able to predict such events. rapid changes in precipitation patterns—such as monsoons in India and the rest of Asia—could sharply disrupt that region’s ability to feed its population. But it seems unaware of the many ways climate change will affect the issues it treats.

It admits that climate change is already happening faster than expected, its best case scenario doesn’t see us stalling warming at 2 degrees—after which the climatologists see real catastrophe. And yet it considers this a Black Swan, not the central event that will guide events 18 years out. Again, the threat is seen primarily in terms of food scarcity and not the disruption caused by losing entire cities.

As I said, I’ll return to this later in the week (and those with the time should read how the report discusses fracking and other energy sources, which is the counterpart to this weird approach on climate). But for the moment, understand that the climate change exacerbated weather that still has people in NYC left without power and still has shipping on the Mississippi facing daunting challenges doesn’t really factor in our Intelligence Community’s understanding of what life will be like in 18 years, to say nothing of today.

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## **US CLIMATE INACTION: BLAME DICK CHENEY**

In one of my earliest blog posts ever—one I’ve lost somewhere—I grappled with why the Bush Administration would choose their Iraq adventure in the face of Peak Oil and climate change.

Why, at the time the US enjoyed its greatest

relative power, after Dick Cheney had fought his earliest battles to dodge congressional oversight with his energy task force to study declining readily explorable oil and its alternatives, would the Bush Administration expend America's hegemonic power in an illegal invasion of Iraq?

This post, asking whether the US refuses to do anything about climate change because it will affect the US relatively less than it will affect other countries, reminded me of that post I wrote years ago.

What if the leaders of the United States – and by leaders I mean the generals in the Pentagon, the corporate executives of the country's largest enterprises, and the top officials in government – have secretly concluded that while world-wide climate change is indeed going to be catastrophic, the US, or more broadly speaking, North America, is fortuitously situated to come out on top in the resulting global struggle for survival?

[snip]

What prompted me to this dark speculation about an American conspiracy of inaction was the seemingly incomprehensible failure of the US – in the face of overwhelming evidence that the Earth is heating up at an accelerating rate, and that we are in danger of soon reaching a point of no return where the process feeds itself – to do anything to reduce either this country's annual production of more atmospheric CO<sub>2</sub>, or to promote some broader international agreement to slow the production of greenhouse gases.

The conclusion to that 8 year old post—one I still think is valid—is that in the face of both Peak Oil and climate change, Cheney committed

the US to doubling down on the source of its hegemonic power in the belief that by retaining hegemonic power for this period of transition out of oil and into alternatives, it would retain hegemonic power thereafter.

Rather than invest the trillion dollars squandered on Iraq (or even the hundreds of billion they had to know it would cost) to make the US energy self-sufficient and lead the world in climate response, Cheney instead chose to seize the largest source of readily exploitable oil, in the process providing an alternative swing producer to the Saudis, whose citizens and funds attacked us on 9/11 (and remember, Iran was teed up to be overthrown next). By choosing the oil route, I figured, Cheney also chose the route that supported relative unilateralism rather than the cooperation that a real climate change response would and ultimately will require.

So I don't so much think the US has decided it will ride out climate change better than other nations as I think it is intent on retaining its hegemonic position of power, which has been built since 1945 on cheap oil. Sure, the US also seems to have grown comfortable with Neo-Feudalism in the last decade, meaning the elite will happily live in their compounds protected from the instability that climate change will and already has unleashed. And the Global War on Terror will morph unnoticeably into a global counter-insurgency to protect those Neo-Feudal bastions.

But ultimately, I think, this country's elites have decided they must retain their grasp on power no matter what. And that power rests on oil.

And don't get me wrong. While I think Cheney fully understood the alternatives presented by this choice and made it for the rest of us, I'm not saying Democrats generally or Obama specifically are innocent. Consider Obama's unwavering focus on energy independence, which he often cloaks in a false concern for climate

change. US power is currently built off a death embrace with the Saudis. But as news reports increasingly—if prematurely—tout, we’re headed for Saudi-level targets of production. That will free us from the troubling demands the Saudis make, shore up our currency, but also keep us precisely where we are, relying on cheap oil to drive our economy and power. That is the goal of Obama’s energy choices, not replacing coal with less-polluting gas. And that explains why Obama just started selling off the rest of the Gulf for exploitation.

It’s crazy, I know. But I sincerely believe there are top secret discussions that insist if we just keep hold of power during what will undoubtedly be a chaotic fifty years, then we can fix whatever mess we’ve caused in the interim. If we can just get the oil while the getting is good, I think they believe, we can adjust to what comes later. Even if the Chinese and Koreans and Europeans will have been eating our lunch in developing new technologies, I guess they believe, we’ll be able to seize them back when the time comes.

The alternative, of course, one Dick Cheney surely recognized during his energy task force, would be to invest instead in a Manhattan project of alternative energy and to dissolve our power into the cooperative structures that will be needed in the face of climate change. That was not, and remains not, a viable option for a top American national security figure.

And so we—and the rest of the world—will melt as a result.

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## WHILE YOU WERE MUNCHING

You’ve given thanks for today’s grub, and now

you're doopey from the soporific effects of holiday gluttony. You've scraped the plates into the garbage disposal and kvetched about fitting all the leftovers in the fridge, or moaned about loosening your belt.

Shopped, cooked, eaten, stowed. Check, check, check, check.

Now add another item to your check list: a much-needed guilt trip.

- Climate change may have contributed to instability in these strife-filled locations: Libya, Mali and the Sahel, the Horn of Africa, Syria.
- Climate change has been and is killing people in Kenya, Ethiopia, and Somalia, even as I type this due to starvation rising from persistent drought and resulting famine.
- Climate change caused the two-day black out for 670 million Indians – that's 1.5 times the population of the U.S., Canada, and Mexico combined without power for two days. Mind-fricking-boggling.
- Climate change effects from 2012 will result in increased food insecurity [PDF] for hundreds of millions of people for the next year and longer. If India didn't have enough water for its crops, where will it buy food for its population? From the U.S. and Canada, which suffered huge crop losses? Even fisheries are negatively impacted.

There, guilt trip. Check.

On Monday after the turkey has worn off and the leftovers are gone, perhaps you'll contact your Congress critter and demand immediate, proactive, and effective policy on climate change right after the turkey doldrums wear off.

Wish you and yours much to give thanks about this holiday.

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# REDIRECTING THE REDIRECTED: RETURNING ATTENTION TO CLIMATE CHANGE POLICY AND PLANNING

Corporate interests with strong ties to conservative politics have undermined



American's awareness and understanding about climate change. Record profits from fossil fuel businesses have been threatened by talk of reducing consumption. Rather than change their business model, these entities went on the offensive against knowledge; facts were stretched until barely recognizable, bolstered with easy untruths, and fed to the public alongside infotainment through co-opted media.

The same fossil fuel interests bought politicians who are easily led by cash infusions or manipulated through electoral scaremongering by increasingly ignorant, easily acquired political factions (hello, Tea Party).

Presto: Americans are the least likely to believe in anthropomorphic climate change, and they're likely to vote for candidates who mirror

their own tractability.

But the truth has a nasty way of bitchslapping consumers and voters until their attention is returned to the facts. Hurricane Sandy, following this past summer's wretched Dust Bowl-like drought, delivered a one-two punch to the public's consciousness. Americans are ripe right-the-hell NOW for corrective action in the form of education and effective policy.

Therein lies the problem: there is no ongoing nationwide sustained discussion on climate change reaching a critical mass of the American public, and they in turn are not demanding better, effective, and immediate policy. There's lots of hand-wringing over the damages caused by the drought and hurricane. There's discussion about improvements to emergency response (tactical), and chatter about building dikes a la Netherlands to protect New York City from future hurricanes (tactical).

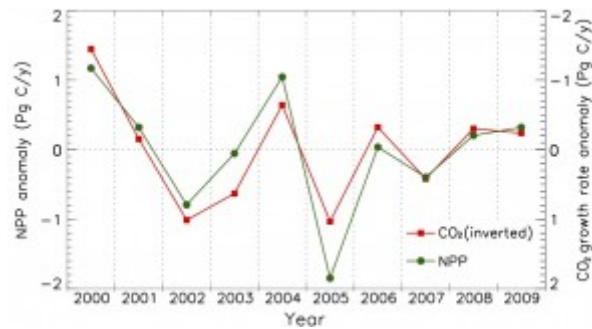
Yet there's only tactical discussion—no society-wide dialog about strategic approaches to climate change.

The challenge to the educated and aware is to change this scenario and fast. The longer it takes for the tractable to become engaged and aware, the more time fossil fuel interests have to re-poison the minds of the public before the next truth-borne bitchslapping.

One of the key threats to this process is the stickiness of misinformation. (Ugh—let's be frank, it's the persistence of the stupid.) Fossil fuel's misinfo takes two forms: deny anthropomorphic component to climate change, and corrupt understanding of climate cycles. These are not mutually exclusive, either.

The first is easy to rebut, however it takes clarity and simplicity scientists generally avoid, and media has ignored when produced.

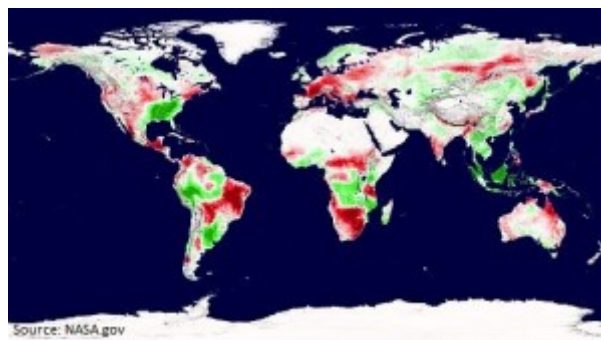
Take a look at this chart:



The relationship between plant productivity and

CO<sub>2</sub> is graphed here—note that the CO<sub>2</sub> is inverse, though. Increased CO<sub>2</sub> levels and subsequent related effects no longer improve plant output; it decreases it (read: decreased food outputs). Humans are the largest controllable variable when looking at global CO<sub>2</sub> levels; we can make it or reduce it at will.

And then this chart – note, for example, the area on South American continent where rain forests are under attack.



Red represents area with substantive plant growth

& productivity declines; green represents increases in the same. Keep in mind that plant growth in sub-alpine, alpine, and desert areas will not offset losses of more dense plant growth in tropical, sub-tropical, and moderate areas.

CO<sub>2</sub>, a by-product of fossil fuel combustion, now increases and decreases in tandem with plant growth. Humans control the amount of plants grown or harvested—period. We plant and harvest crops around the entire world, from edible commodities to lumber. If we plant less than we harvest (ex. rain forests cut down and replaced by a lesser amount of crops), it's anticipated that CO<sub>2</sub> level will reflect this change based on the current trend graphed above. (One might



reasonably expect a similar shift in O<sub>2</sub> levels as well, modifying the percentage of atmospheric CO<sub>2</sub>.) With adequate reversal of plant loss combined with reduction of anthropomorphic CO<sub>2</sub> generation, CO<sub>2</sub> to plant productivity may revert to a more positive relationship seen from 1982-1999.

This is simple evidence of man's impact on the planet, and specifically on climate change-inducing greenhouse gas CO<sub>2</sub>.

Let's now refer to past history, to address the issue of climate cycles. Talking heads and think tanks funded by fossil fuel and conservative interests often push back at anthropomorphic roots of climate change by pointing to climate cycles [PDF]. In short, they ignore climate change altogether because it's natural. (Yeah, don't worry about those potato chips. They're all natural.)

But humans have seen the results of oh-so-natural climate change by cycle. In his book, *Collapse: How Societies Choose to Fail or Succeed*, Professor Jared Diamond looked at several societies that crashed, as well as possible causes:

Careful analysis of the frequency of droughts in the Maya area shows a tendency for them to recur at intervals of about 208 years. Those drought cycles may result from small variations in the sun's radiation, possibly made more severe in the Maya area as a result of the rainfall gradient in the Yucatan (drier in the north, wetter in the south) shifting southwards. One might expect those changes in the sun's radiation to affect not just the Maya region but, to varying degrees, the whole world. In fact, climatologists have noted that some other famous collapses of prehistoric civilizations far from the Maya realm appear to coincide with the peaks of those drought cycles, such as the collapse of the

world's first empire (the Akkadian Empire of Mesopotamia) around 2170 B.C., the collapse of the Moche IV civilization on the Peruvian coast around A.D. 600, and the collapse of the Tiwanaku civilization in the Andes around A.D. 1100.

Diamond's suspicions about the Mayans' collapse were recently validated. You'll note the recent news about the Mayans' societal collapse—climate change did them in. They abandoned their agrarian-centric way of life and moved to the beach after drought-driven downsizing and rapid de-urbanization.

(Unfortunately for us, it's not certain if there will be a recognizable beach after the loss of polar ice and the subsequent rise of ocean levels. There certainly won't be enough beach for all of us, either, assuming more folks will flee the drought-plagued heartland. And who will grow crops for us while we shift around on the beach for a new way of life?)

If Diamond was also correct that the Mayans' collapse was tied to a cyclical climate change, why aren't we talking about this cycle and what our response should be? This same 208-year cycle coincides with the de Vries-Suess solar cycle, implicated in other past climate change effects.

Do the math, it's pretty simple.

Moche IV collapse	~600 A.D.
Classic Maya drought and collapse	~600-800 A.D.
—	
Tiwanaku collapse	~1100 A.D.
—	
Great Famine, Late Middle Ages, Europe	1315-1317 A.D.
—	

30-year drought, Texas-Mexico	1450-1489 A.D.
Spanish famine	1504 A.D.
—	
Worst documented drought, Texas- Mexico	1697-1716 A.D.
Mongolian drought and intense volatility	1723-1778 A.D.
—	
Dust Bowl and drought	1934-1940 A.D.

Note these societal collapses and later major climate events occur in clusters at roughly 208-year cycles. There are other solar cycles [PDF] as well, each of which may result in climate change.

We can see these naturally occurring cycles. We can see the link between CO<sub>2</sub> production and human activity. They are not mutually exclusive, and frankly, the former may greatly intensify the effects of the latter. How much of the Mayans' collapse was due not only to drought, but poor resource management, overpopulation, and slow response to conditions that exacerbated the effects of drought?

At a minimum we should begin a national and global dialog about climate cycles and how we anticipate responding to their effects instead of allowing climate change denialists to use cycles as an excuse to avoid any discussion. Clearly even cycles represent catastrophic risks—we should not ignore them.

A far better approach would be a conversation conducted with a degree of urgency about climate change regardless of its natural or

anthropomorphic causes. Sticking our heads in the sand will only result in drowning as hurricanes make landfall and ocean levels rise.

Let's look at the math again: based on the 208-year de Vries-Suess cycle, the next peak should occur about 2130 A.D with conditions worsening for decades in advance as the peak approaches. If this past handful of years is any indication—and by my guess we are only half the way into the current de Vries-Suess cycle—2130 will be beyond ugly if we do not start our dialog now.

Moche-Mayan-Tiwanaku collapse ugly.