



ClearSky
Climate Solutions
for our shared future



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Climate Change: By the Numbers

- **1.4-6.7 million:** number of new immigrants from Mexico to the USA in the next 70 years that could be driven by climate-related crop failures in Mexico. [A new study](#) by Princeton University researchers attempts to link immigration patterns to agricultural success.
- **40%:** measured decline in global populations of marine phytoplankton since 1950. Phytoplankton is one of the primary drivers of the ocean's food chain, and the population drop has been linked to warmer surface ocean temperatures, which prevent upwelling of cold, nutrient-rich seawater. [Read more here!](#)
- **2.7 million:** metric tons of CO₂ equivalent released by the 2010 World Cup in South Africa. The largest slice of the Cup's carbon footprint (67%) came from international air travel. [Read more here!](#)



US Senate punts, ClearSky keeps running

Welcome to the August 2010 edition of the ClearSky Climate Solutions Newsletter. This quarterly bulletin is designed to help keep you informed of the latest action at ClearSky as well as provide important climate change news from the USA and around the world.

Recent Happenings at ClearSky:

It's been an exciting summer for us! In between the usual festivities of the season (backpacking, rafting, weddings galore, etc.), we've started several new projects at ClearSky. We were obviously disappointed by the inability of the US Congress to move a climate bill forward (more on Page 2), but progress in other areas gives us reasons to be hopeful.



Here's a brief rundown of ClearSky projects from this past summer:

- Working with [Pact International](#) to examine their forest carbon work to-date and design their REDD strategy for developing countries;
- Submitting consulting proposals to:
 - o develop forest carbon training materials for an international NGO,
 - o conduct a national-level reforestation assessment in Ghana, and
 - o measure the potential carbon benefit of avoided wildfire at the [National Center for Ecological Synthesis and Analysis](#).
- Organizing a "Carbon Offsets 101" training course with the [Northwest Environmental Training Center](#) (coming this November!);
- Starting a team with [Carbon Rally](#), a social-network and competition-based program to reduce GHG emissions (you can join our team!);
- Completing Greenhouse Gas Assessments for a habitat restoration NGO in Costa Rica, an international professional conservation organization, a wedding, and a Missoula-based affordable housing nonprofit.

As always, you can keep up with ClearSky at our [News Page](#) online!

Climate Change: By the Numbers – Cont.

- **#1:** the ranking of June 2010 among the warmest months ever recorded. The US National Oceanic and Atmospheric Association (NOAA) made [this announcement](#) based on global land and ocean surface temperatures.
- **300%:** marmot population growth over 10 years in a Colorado study population. [Read more](#) about how the cute rodents might actually be benefiting from warmer mountain temps, and how climate shifts are altering the marmots' food web and behavior.
- **0.2 to 7.0:** grams of CO₂ equivalent released into the atmosphere by a typical [Google search](#), depending on how many tries it takes to find what you're looking for. Most of this carbon footprint is from energy use to power the servers at data centers, and for air conditioning to keep the servers cool.
- **\$700 billion:** the cost required for the USA to switch all of our coal-fired electricity for natural gas electricity, according to the American Public Power Association. This includes the cost of building new power plants, transmission pipelines, and storage facilities.

Climate Change in the News

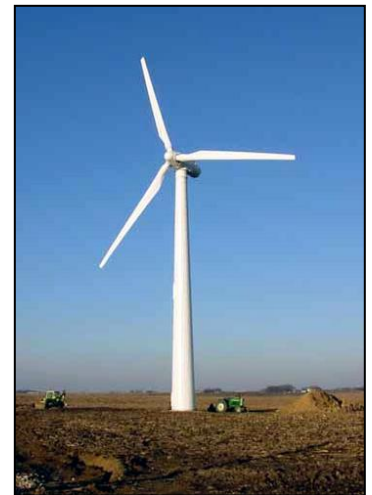
Click on the headlines and links below to get the full story

[US Climate Bill: one step forward and two steps back?](#)

The US Senate has stalled yet again in their efforts to pass a bill to address our nation's global warming emissions. After the US House of Representatives passed the landmark [American Clean Energy and Security Act](#) over a year ago in the summer of 2009, the nation and the rest of the world has been watching carefully to see if the Senate would be able to pass a similar bill. Democrats have been unable to maintain cohesive party support for climate legislation, and not a single Republican has expressed support for the bill. Instead, Senator Harry Reid (D-NV) has introduced a much narrower bill to address deep-water oil drilling and to boost the [Home Star](#) energy efficiency program – the [Clean Energy Jobs and Oil Company Accountability Act](#). Lawmakers and pundits have been quick to praise and criticize the Senate's failure to pass a cap-and-trade bill to control greenhouse gas emissions. Prospects are still alive to strengthen the Senate bill as it moves through the debate process this fall, through added measures such as a [Renewable Energy Standard](#) to require the US to establish a minimum percentage of alternative energy by a certain date.

[Clean energy expanding around the world](#)

During the past few months, there have been a slew of announcements and milestones regarding alternative energy around the world. Impressively, more than half of the new electrical capacity added in 2009 in the US and Europe was from renewable sources, and the total amount of green power added around the world was an all-time high. Over 80 GW (1 GW=1,000 MW) of renewable energy capacity were added to the world's electrical grids, despite the global financial crisis. According to the Renewable Energy Policy Network, China alone added 37 GW of alternative energy. [Spain](#) now has the world's largest capacity for solar thermal energy. In the US, installation of new wind energy capacity has been slower in the first half of 2010 compared to 2009. The [American Wind Energy Association](#) reports that the US installed over 10,000 MW of wind energy capacity in 2009, but that only 1,200 MW have been installed during the first 6 months of 2010.



Wind energy installation was impressive in 2009, but can the US keep pace in 2010?

Required Reading

[State of the Climate](#)

(NOAA) has released its 2009 State of the Climate Report, which documents the progress of global climate change by focusing on 10 key indicators. You can get the [full report](#) or watch a [short video](#) at NOAA's Climate Services website.

[The Economics of Ecosystems and Biodiversity \(TEEB\) for Business Report](#)

This new report is a compilation of studies about how ecosystems and biodiversity influence the business world. Some of the discussions include how biodiversity losses can slow business growth, how aware consumers are regarding ecosystem health, consumer responses to corporations' environmental reputations (BP, anyone?), and more.

[Chalmers Climate Calculator](#)

Researchers at the Chalmers University of Technology in Sweden have developed an easy-to-use climate model for online public use. The tool is built upon current understanding of climate forcing, and allows users to manipulate the model for different future scenarios of CO₂ emissions, emissions reductions, deforestation, and climate sensitivity. Give it a whirl – it's a breeze!

Climate Change in the News – Cont'd

[US EPA keeps moving forward on climate change regulations](#)

Stemming from a 2007 Supreme Court mandate, the US Environmental Protection Agency (EPA) has been moving steadily to develop rules and regulations for controlling our nation's greenhouse gas emissions. These measures are now becoming increasingly important as the US Congress has been unable to enact any legislation that would preempt the EPA's requirement to act.



Most notably, the EPA has [issued final rules to regulate greenhouse gases from stationary sources like power plants, refineries, and factories](#). This plan is intended to regulate about 70% of US carbon emissions, focusing initially on large sources that emit more than 100,000 metric tons of CO₂ per year. Under the Clean Air Act, the EPA has the authority to regulate sources as small as 250 metric tons of CO₂ per year, but focusing on large sources will reduce administrative complexity and reduce impacts to small businesses. These regulations take effect in 2011, and President Obama has stated repeatedly that [he will veto any congressional attempt to block EPA's authority](#) on climate change issues.

Following a lawsuit from environmental groups, the EPA is now reviewing [air pollution rules for 28 industries](#), examining if current technology allows for more stringent pollution limits and the public health impacts of the allowable pollution levels. Some of the industries covered in this action are large carbon-emitters, like aluminum smelting, cement production, and manufacturing. Therefore, if tighter regulations are imposed in these sectors, it may have climate change benefits as well.

The EPA has also released a new "[Transport Rule](#)" to control emissions of sulfur dioxide (SO₂) and nitrogen dioxides (NO_x) in the eastern US. These gases contribute to acid rain, smog, asthma, bronchitis, and a range of other problems, and they are primarily emitted from coal-fired power plants. The new rules aim to cut SO₂ by 71%, and NO_x by 52%, in 4 years. Many coal plants will need to be scaled back or shut down to meet these limits, which will also have substantial benefits in reducing greenhouse gases.

In May, President Obama signed an executive order directing the EPA to develop [stricter fuel economy and emissions standards for cars and trucks in the USA](#). This action sets standards for new cars and trucks made in 2017 and beyond (2014 and beyond for trucks), which goes above and beyond fuel economy standards set by the President earlier in the year. This action creates a national benchmark, which automakers have been calling for, rather than a patchwork of individual state regulations.

Closing Credits

This Newsletter is brought to you by the entire ClearSky team:

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Featured Partner

ClearSky would like to recognize the work of our featured partner, [Pact International](#). ClearSky CEO Keegan Eisenstadt is working with Pact this summer to help them design their overall strategy for assisting local communities in developing countries with forest carbon projects. Forest-dwelling communities are being approached from all sides with opportunities to engage in carbon-saving projects, but Pact's priority is to make sure that local people are well-informed, organized, and respected. We're excited to be helping them with this effort!



A view from the field

This issue's featured photo is from the heartland, when ClearSky project developer Stephen Handler travelled to Cornell College in Iowa to talk about climate change and carbon markets. (And all the students stayed awake!)



Looking back

If you'd like to access any of the previous ClearSky E-Newsletters, you can find them all at our website:

www.clearskyclimatesolutions.com/newsletter.html

Looking ahead

If there's a topic or question you'd like to see us cover in one of our newsletters, just let us know! You can reach us by email at:

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NEW!! You can keep up with ClearSky on Facebook, Twitter, and our blog!



Thanks for reading, and stay tuned for the next ClearSky E-Newsletter!