

# Missing Arctic Sea Ice: Wake-Up Call

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By Dr. Reese Halter

As a field biologist with more than a quarter of a century of experience, the unprecedented warming of our globe is disturbing to my very core. Having spent the first half of this year reading and writing for my upcoming book on the beleaguered state of our forests in western North America, the [news](#) on the wire over the weekend (September 10, 2011) by German researchers that the Arctic sea ice reached its lowest point since the start of satellite observations in 1972 is outright heartbreaking.

On September 8, 2011, the North Pole's ice cover shrank to 1.64 million square miles or about a half of a percent beneath the record low set in September 2007 according to the University of Bremen's Institute of Environmental Physics. Moreover, air temperatures were 2 to 7 degrees Fahrenheit higher than average (compared to 1981 to 2010) over the Arctic at 3,300 feet above the surface. The feeble argument that the melt is accounted for by natural variability is clearly erroneous because we have reached an all-time low cover, furthermore the volume or thickness of sea ice is continuing to mirror that of the diminishing sea ice cover.

The real question is what does the leadership in Washington, DC intend to do with the latest scientific information? Science has played a significant role shaping every facet of our world, as we know it today. As a profession, we are

rigorously trained to be cautious and meticulous. We are curious by nature and our business is knowledge. Knowledge is power. And it empowers us to take action when necessary.

In 2008 Wall Street received almost a trillion dollars yet today we are faced with an unacceptable unemployment of more than 14 million people who live on Main Street.

The most powerful and watched media corporation in the U.S. chooses daily to denigrate climate science. Interestingly, the same people enjoy their smart phones, i-tablets and flat-screen televisions -- all courtesy of ingenious scientific innovations.

If those same people who sneer at climate science were faced with a sick child and they sought medical advice from 100 doctors, I predict they would follow the consensus of the experts. Particularly if 97 or 98 out of 100 doctors told them their child were deathly ill and the steps necessary to save its life. The opinions of the two contrarian medical scientists would be dismissed.

Let's examine this same scenario only substitute "medical" scientist with "climate" scientist. Ninety-seven to ninety-eight percent of the 1,372 scientists [polled in 2010](#) by Stanford University agree that humans are forcing Earth's climate by burning fossil fuels, releasing heat-trapping greenhouse gases.

It appears that the most powerful media empire and special interest groups like oil; gas and coal are hiding behind the intellectual wall of informed denial and social irresponsibility with respect to global warming.

NOAA has predicted that a cooling of the equatorial Pacific Ocean has begun or the return of the La Nina. This is potentially disastrous for the southern half of the U.S. Texas is facing unparalleled drought damages estimated for 2011

in agriculture alone in excess of \$7 billion. Thousands of buildings have burned and wildfire has scorched over 3.6 million acres in the past 12 months of record-breaking drought. The price of cotton, wheat and corn crops (to name just a few) are spiking. The cattle herd in the U.S. has been culled to a population now equal to that of the size of mid 1970s. Expect beef and all other commodities to continue to rise this fall and winter of 2012 at the supermarket.

It is very apparent that elevated temperatures are creating climate disruption. For example, Hurricane Irene caused \$7.4 billion in damages and Tropical Storm Lee, seven days later, inflicted another couple billion in damages.

What exactly do the lawmakers intend on doing about future climate disruption? The people on Main Street want to work. So why not begin to plan for future climate disruption by creating millions of jobs that will protect our nation, reduce our greenhouse gas emissions and demonstrate to the world that the U.S. is taking a leadership role in fighting climate change. Incidentally, Australia has recently brought in a carbon tax and China is trialing a greenhouse gas reduction for six of its cities and 250 million people.

There are at least four areas where both white- and blue-collar jobs could be created:

Professor Steven Chu, Energy Secretary and Nobel Prize-winning physicist, is a proponent of mimicking the missing sea and land ice on Earth by making all roofs and pavement white (or at least light colored) to help reduce global warming by both conserving energy and reflecting the sunlight back into space. At least two million jobs could be created coast to coast from this endeavor. If every country followed America's lead it would be the equivalent of taking all the cars in the world off the road for 11 years.

The current drought in the South is causing at least 700

watermain breaks a day in Houston; and an antiquated water system throughout the U.S. that was initiated in the late 1800s, the 1920s and post WW II is leaking at least 7 billion gallons of water, daily. The American Society of Civil Engineers has graded the U.S. water infrastructure D- stating that the water mains are well beyond the designed span of 65 to 90 years.

Given that every climate model I've seen (over two dozen and counting) predicts more severe drought for the ensuing years and decades ahead it is incumbent that the lawmakers plan for a drier future and protect the citizens of our nation.

Stopping leaking water is no longer an option; it's a necessity. Furthermore, the economy is a wholly owned subsidiary of the environment.

There are at least two models that the lawmakers can immediately examine:

Las Vegas - strict water conservation has helped water consumption drop even as the population has ballooned, as the city has tough rules promoting water reuse.

New York - Mayor Bloomberg has spent \$252 million on wireless meters that detect leaks four times a day, promoting green rooftops and other ground-breaking green infrastructure to capture rain water, reduce sewer overflows and save the city \$2 billion over 20 years.

At least 4 million jobs to redo the aging water systems, protecting towns and cities across the United States could be created.

There are at least four million homeowners across the West who straddle the urban/wildland Ponderosa pine interface. This year alone Arizona and New Mexico have both recorded their largest single fires (Wallow and Las Conchas, respectively) since the inception of record keeping. Climate

change has enable bark beetles to kill at least a billion trees across 40 million acres in the West (combination of drought which has weakened the trees and warmer winter temperatures enabling beetles to successfully overwinter and breed at historic levels).

A Smokey Bear fire policy has prevented wildfires for almost 100 years. This has allowed forests to create a huge food supply for the beetles, which otherwise would not be available, thus preventing them from reaching an epidemic.

One hundred and eighty million acres of Ponderosa pines spreading across America are overstocked due to fire suppression. Removing dead beetle-killed trees and restoring the Ponderosa pine forests by thinning them to a healthy stocking level of 100 years ago could easily create one million jobs. Our forests are the life force of the nation, providing fresh air and clean water - priceless ecosystem services.

According to the EPA ever day in the U.S. we dump approximately 690,000 tons of material into landfills. These landfills bleed toxicity in the form of heavy metals into underground water and release heat-trapping greenhouse gases like methane (23 times stronger at retaining heat than CO<sub>2</sub>) into the atmosphere.

Building thermal conversion landfills could create three million jobs coast to coast. These facilities are lined and sealed so no toxicity pollutes the ground water, and they are capped and slowly cooked using high pressure and temperature to break down toxic long-chained molecules. Moreover, by siphoning the methane from the process it is used to power the entire system. The thermal conversion process converts plastics, hospital wastes, diseased cattle, feedlot manure, bleached paper, yard waste, agricultural waste, forestry waste, cardboard, used tires, municipal solid waste, trash, sewage sludge and even anthrax into oil an

non-toxic useful products including biogas. This process safeguards the environment for our children.

America excels in science, technology and engineering; it's time to roll up our sleeves and put Main Street back to work; show the rest of the world that the United States values the environment and is committed to reducing greenhouse gases, now!

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