

HuffPost Green

Climate Disruption: Drought and Dead Trees

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History is rich with lessons, but will political hubris take heed of past civilizations annihilated by drought? The Akkadian, Moche, Tiwanaku, Mayan, and Anasazi to name but a few are well documented in our history books.

When speaking this week to colleagues in Texas on the brutal drought gripping the South and estimated 60 million dying or dead trees in the seven counties surrounding Houston -- a city normally contending with deluge, not drought -- I was struck by the fact that neither the state nor the feds have any plans currently in place to deal with climate disruption.

Droughts are enveloping regions worldwide, and killing mature forests on every forested continent. And every climate model that I have seen predicts that as greenhouse gases rise (from the burning of fossil fuels) so too will the incidences of drought.

There's 180 million acres of Ponderosa pines spreading across the West and up until 90 years ago surface fires ignited by lightning burned at least once a decade. As a result these ecosystems developed some nifty traits to adapt to these fast moving surface fires. Foot-thick bark and holding the first live branches 18 feet or so above the surface enabled them to easily grow with the occurrence of wildfires. With a Smokey Bear fire policy in place to extinguish all fires our Ponderosa forests are now overcrowded, sickly, water-starved and awaiting the insatiable pine bark beetles.

Several proposals have been put forward by leading restoration scientists to thin-out these forests; they are the life force providing clean air and a safe water supply to millions of citizens, industries and agriculture across the West. Problem. The lawmakers refuse to acknowledge the science irrefutably showing that releasing 82 million metric tons of greenhouse gases daily on Earth are forcing the climate. These are the same lawmakers, I might add, that welcome the innovative science enabling them to use their smart phones, i-tablets and flat screen televisions.

Instead of embracing the Ponderosa thinning program which would create at least a million jobs and protect four million homeowners who back into these urban/wildland tinder-dry forests, the lawmakers have chosen to support a pipeline from the Alberta tar sands to increase rather than decrease America's colossal carbon footprint. Perhaps even more confounding is why collectively the big five oil companies are still eligible for a \$21 billion subsidy, annually. Their quarterly profits, particularly in this economy, certainly don't warrant any taxpayer dollars.

As temperatures on Earth continue to rise unintended consequences of climate change are becoming more life threatening. For example, this week in [Nature](#) climate scientists showed one of the paradoxes of global warming; that is, as surface temperatures rise, upper stratospheric temperatures plummet and lingering (banned in 1987) chlorofluorocarbons created a hole over 770,000 square miles (bigger than the combined area of Alaska and Idaho) in the ozone layer above the Arctic. A hole in the ozone layer above the Arctic has never been witnessed before. Let me remind you that our [whales](#) (blue, fin and sperm) are developing sunburns in the Northern Hemisphere and if this hole above the Arctic reappears the incidence of skin cancer and cataracts in the U.S. will increase, dramatically.

Another major unintended consequence of rising

greenhouses gases in the Northern Hemisphere, in particular western North America, has been the removal of the ecological "cold" barrier in the mountains enabling hundreds of billions of ravenous bark beetles an opportunity to kill billions of mature pine trees. The loss of the high elevation whitebark and limber pines creates a very serious problem for retaining winter snowpacks, which feed water supplies for 40 million of people, industries, agriculture and critters across the West.

Field biologists are trained to observe nature's patterns. We are now witnessing entire regions enveloped by drought and rising temperatures e.g. southern United States and death of billions of trees across the West. The lawmakers are well advised to listen to field biologists whose only agenda is to maintain the genetic tapestry of life on our planet. Are the lawmakers in Washington, DC intending to plan for climate disruption? If not be forewarned: Failing to plan is planning to fail.

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