



Unprecedented Storm Surges (e.g. Sandy)



Extended Droughts



Altered Ecology - Beetle Kill near Granby



Forest fires in Colorado



Waldo Canyon Fire 2012

### It is not hopeless.

- Let your money reflect your values: consider Divesting from fossil fuels and Reinvesting in renewable energy, putting solar energy on your roof or in a local solar garden, convert to geothermal heating and cooling, buy an electric car, eat locally grown foods, etc.
- Join Citizens Climate Lobby and related groups to push for carbon fee legislation.

### Your local Go2 Green Guide:

*Climate Change -*

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### Further Resources

- Berkeley Earth (<http://berkeleyearth.org>)
- Climate Change: Our Global Challenge (<http://portfolio.du.edu/OurClimate>)
- Skeptical Science (<http://www.skepticalscience.com>)

LIVING OUR VALUES SERIES

# Guide to Climate Change Facts



***IN TRUST***

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Mabrie J. Ormes  
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GREEN FIRST

# Climate Change

## Summary:

The planet will be fine. We're less clear about the future of homo sapiens and the world our grandchildren will find.

Like wine, CO<sub>2</sub> is both good and bad. We are all familiar with: "Too much of a good thing."

## Proverbs 23:31-32

*"Do not look at wine when it is red, when it sparkles in the cup and goes down smoothly. In the end it bites like a serpent and stings like an adder."*

## The Facts :

1) CO<sub>2</sub>, methane and other greenhouse gases control our planet's temperature. There are natural and man-made (anthropogenic) sources of both these gases.

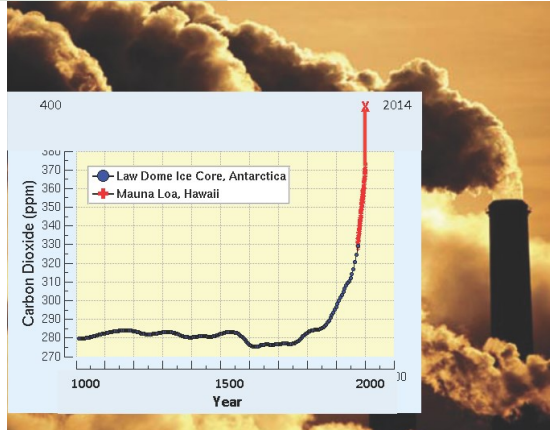
- Natural: 100-600 million metric tons/year;
- Human: 30 billion metric tons/year.

2) CO<sub>2</sub> is now at 400 parts per million (ppm) in Earth's atmosphere, 40% of which has come from anthropogenic sources. The last time it was this high was 3 to 5 million years ago. Since the beginning of the ice age cycles 0.5 million years ago, the CO<sub>2</sub> concentration varied between 200 and 285 ppm. Homo sapiens evolved during this relatively cool period in Earth's climate history.

## Connecting the Dots

Fossil Fuel Burning

CO<sub>2</sub> Dumped into Atmosphere



3) Globally, burning fossil fuels dumps 30 billion metric tons of CO<sub>2</sub> into the *global commons* we call our atmosphere. Solid waste is produced at a rate of 1 billion metric tons per year. We pay to bury our solid waste trash; we pay nothing to dispose of this waste gas. It's time to tax ancient hydrocarbon fuels at the point of extraction.

4) Global temperatures are rising as a result. At the web site *Berkeley Earth* (<http://berkeleyearth.org>) you can find the change of the temperature at major locations around the planet since 1960. (E.g. Denver (2.0 +/- 0.2) °C)

5) The world governments have set a target of no more than 2 °C in additional warming, but no laws have been put in place to make this happen. There is hope that the recent US-China agreement will help lead to United Nations action in Paris in November 2015 in support of this goal. We already see the effects of warming.

"The biggest and most immediate impact from *global warming* will be more frequent and more violent storms." .... Erik Mollo-Christiansen, circa 1995, Former MIT Professor and Associate Director of Earth Sciences at NASA Goddard Space Flight Center.



Larger Hurricanes (e.g. Katrina, Sandy,...)



Frequent Intensified Tornadoes



Sea Level Rise (King Tide - Miami Beach)