

Our responsibility to the Earth

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Spring came late in Vermont, as the daffodils did not start opening in Pittsford till April 18, and the forsythia were ten days later. Rain for days on end from slow moving weather systems led to substantial flooding. The grass grew profusely weeks before it was dry enough to mow. I planted cool weather crops, lettuce, kale and broccoli by the first of May, and by now even the summer squash and tomatoes are growing fast.

Earth Day was a Sunday this year. In the morning I spoke at the Dorset Church about our failing to accept our deep responsibilities to the Earth. In the afternoon, I spoke to a group called 'Earth Matters' on the green in Manchester. The challenge we face is the same whether framed in spiritual or secular language: time is running out for humanity if we continue down the path of mindlessly exploiting the Earth for short-term profit.

The glaring question facing us all is: who is responsible for solving this mess?

In early May I spent a week in the mountains of Alberta, Canada speaking to an international meeting of hundreds of scientists working on global water and energy issues. The title of this open science conference was "Extremes and Water on the Edge". Introducing the conference, the Deputy Minister of Environment and Climate Change Canada explained how fast the Canadian north is changing as ice, snow and permafrost melt. Planning for the future is well underway, but the adaptation costs are immense. Ironically Alaska has just the same changing climate, but planning is very difficult, because federal policy requires them to pretend it isn't happening!

As the climate changes, so the global water and energy cycles are changing. The long-frozen north is melting; and floods, droughts and heat waves are becoming more frequent across the globe. Disaster response and future planning for resilience were hot topics. Scientists are in no doubt about what needs to be done to move away from a fossil fuel economy to a renewable energy economy; but traditionally scientists have preserved the integrity and independence of science by leaving policy to others. My message to this scientific community was that we all have a moral obligation to the Earth, especially earth scientists who can see clearly the dire future that lies ahead under 'business as usual'.

This moral responsibility of course extends to all of us; and it is time for citizens and professionals to speak up for the interests of all our children and life on Earth. We can no longer leave issues of 'policy' to a federal government that is simply ignoring all that we know about the climate system in order to protect the massive investments of the fossil fuel industry (who are bribing them).

Across the US and on a global scale, the renewable energy transition is going nowhere near fast enough to stave off disaster. The Earth's energy imbalance is about 1.3 watts per square meter and 93% of this extra energy is being stored in the oceans for the decades and centuries to come. This may seem small, comparable to a night-light, but it is about 250 times as large in total as the entire global electrical energy production. Rising sea level comes from this heating of the oceans, along with the melting of glaciers, which puts all our coastal development at risk. The flooding of New York by hurricane Sandy illustrates what happens when warmer seas give stronger storms with powerful storm surges along with higher sea-levels.

So redouble your efforts for the renewable energy transition. Work together to build creative synergistic solutions that will work for everyone, because so much is at stake, and discuss openly the moral issues we face with your colleagues and neighbors.

