

BOB DOPPELT

It's time to begin bracing for effects of climate change

By Bob Doppelt

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With this column I begin my eighth year of writing about climate change for The Register-Guard. When I began, my goal was to explain the causes and risks of the problem. Most readers now understand that human-induced climate change is underway. So now I'll turn my primary focus to the implications for people and options for moving forward.

First, it is important to know where things stand. I'll start with some good news, discuss the bad, and end with a hopeful note.

Last year, for the first time on record, the amount of greenhouse gas emissions was no greater than in the preceding year. According to the International Energy Agency, about 32.3 billion metric tons of carbon dioxide were emitted in 2014, about the same as in 2013, even as the world economy grew by 3 percent. The reasons are unclear. But it could suggest that energy efficiency and emission reduction efforts are beginning to pay off.

In addition, the Obama administration recently pledged to the United Nations that the United States would reduce greenhouse gas emissions by between 26 percent and 28 percent below 2005 levels by 2025. This is important, because over the past century we have generated by far the greatest amount of climate-disrupting emissions. Our nation remains the world's second-largest emitter. We have a substantive — and moral — responsibility to lead the way on emission cuts. The U.S. pledge might also encourage other nations to commit to big emission reductions.

Unfortunately, unless global emissions are quickly slashed far beyond the level pledged by President Obama, we will still see an average global temperature increase of somewhere around 3.6 degrees above the levels of the late 1800s.

Years ago, climate scientists thought it would take until the end of the century for this to occur. With the continued global emissions and better science, it now appears it will happen much sooner.

Last March in Scientific American magazine, for example, Dr. Michael Mann, author of the famous “hockey stick” graph depicting the rapid rise in global temperatures, wrote that if the world keeps burning fossil fuels at the current rate, due to factors previously unaccounted for in climate models, a 3.6-degree increase might occur as soon as 2036 — just 21 years from now.

I dearly hope Mann’s analysis is wrong, because scientists believe that a 3.6-degree temperature increase is likely to trigger uncontrollable climate disruption. Even if he is mistaken, due to the legacy of human-generated emissions already concentrated in the atmosphere and the continued use of fossil fuels worldwide, additional destructive warming is certain.

In short, we are facing a civilization-changing event. We don’t have decades. To avoid extremely damaging and possibly irreversible effects, greenhouse gases must be rapidly and dramatically slashed in the immediate future. We must also find ways to safely suck large amounts of carbon out of the atmosphere.

New technologies alone cannot accomplish these goals. From this point forward, every decision by people and organizations of all types, and every public policy, including those affecting land use and economic development, must be made with a top goal of minimizing or eliminating the use of fossil fuels and their associated emissions, and increasing the ability of forests and other ecological systems to sequester carbon.

At the same time, we must rapidly prepare for the now inevitable rise in temperatures. Climate preparedness programs are underway locally and globally. The focus is primarily on water resources, transportation and other natural and man-made systems.

However, in what might turn out to be a mistake of epic proportions, there have been no efforts to teach the skills that people and groups will need to cope psychologically, emotionally and spiritually with the increased frequency and

intensity of extreme weather events and the toxic stress associated with climate disruption.

Research has linked climate impacts with debilitating anxiety, depression, moral distress, compassion fatigue and post-traumatic stress disorder. Mounting psychosocial troubles have been identified, including interpersonal aggression, extremism, crime and violence. The Pentagon has connected climate disruption to more terrorism and war.

Left unaddressed, these human reactions will undermine the health and well-being of people worldwide and in Lane County.

They also threaten to stall or derail efforts to cut emissions and reduce climate disruption to manageable levels.

Fortunately, people can learn skills that allow them to use climate-related adversity to learn, grow and thrive, rather than harm themselves, other people or the environment.

We are now in the era of human resilience building. Teaching youth and adults alike preventive psychosocial resilience skills should become as common as learning to read and write.

Bob Doppelt, executive director of The Resource Innovation Group, writes a monthly column for The Register Guard on issues related to climate change.