

## **WTE Column of March 1, 2014. Editor's Headline: "Coal Could End Our Way of Life"**

A childhood ditty in German, language of my youth, tells of softly falling snow, lakes frozen, woods glistening in wintry splendor. Its second verse hopes to keep away "hunger and harm."

The song comes to mind after my German cousin informed me, they've had no winter at all this season: "Not a single snowflake hereabouts, and soon it's the vernal equinox." When I inquired how the Black Forest fared two hours south, where her family likes to ski and hike, she said the famous mountains had gotten but the occasional dusting of snow. Yes, they'd had stormy weather but little precipitation.

Her son and spouse, who make their home in Switzerland with their five-year-old twins, say that dry conditions prevail in the Alps also. Elevated temperatures have triggered avalanches and landslides down mountainsides that have quit their frozen state. Alpine terrain no longer covered by ice-sheets is "porous like Swiss cheese," they tell me.

Meanwhile in California, where long-lasting, record droughts have devastated the fields and orchards of the Central Valley, agricultural communities and interdependent industries are in despair. Decades ago, on my arrival in California as a young woman, "The Valley" was touted as America's breadbasket.

Yet Wyoming has been blessed with abundant snowfall.

There's a flip side to this blessing: record freezes that have extended from the American East to the Midwest, at times reaching Wyoming, are phenomena of a polar vortex that, unmoored from its northern abode, has repeatedly gyrated southward. Those astounding shifts happened due to masses of warm air accumulating over places like Greenland and Alaska. The polar vortex is a wintry hurricane-type event normally confined to the North (or South) Pole; its wandering, the unforeseeable consequence of what scientists call climate forcing.

It's easy to believe that Swiss and German snowless winters are worlds away from local largesse, but in terms of global climate patterns, they are closely linked. North America has its "Swiss Alps" by way of Glacier National Park, which stretches from Montana into Canada. When explorers first mapped the region in 1850, they recorded 150 glaciers. Today, the range has shrunk to 25 diminished mounts. When Jared Diamond chronicled his Montana observations in "Collapse" in early 2005, he warned that all remaining glaciers—27 at the time—would have disappeared by 2030. Now, researchers fear that Glacier National Park may be gone within a decade, writes Christopher White in his recently-published, "The Melting World."

A year or two of record snowfall does nothing to stave off disaster: longer summers, coupled with rising temperatures, eat up the snow before it even solidifies into ice. The author notes that glaciers are guides to our planet's health; the demise of a glacier with its disappearance of meltwater spells death to a multitude of organisms, humans among them.

“Warm and cold periods have always come and gone,” people tell me. “Earth will take care of itself.”

That’s wishful thinking, alas. Previous warm and cold periods took millions of years to wax and wane; the current trend is alarmingly fast. Today’s glacial extinctions are crises for millions who depend on meltwater for irrigation, recreation, and drinking water. Globally, more than 50 percent of freshwater-needs are met by glacial run-off; in the American West, the ratio is 70 percent, observes White, who also maps glacier loss in the Andes, the Alps, the Cascades, the Rockies, and the Himalayas. Massive infusions of glacial (and polar) meltwater not only engender floods and rising sea levels, but also they disrupt ocean currents that, in turn, affect air currents and cloud cover.

Although a number of factors—El Nino/La Nina; the Pacific Decadal Oscillation—contribute to local warming and cooling trends, scientists agree that, globally, climate disruptions are mostly due to greenhouse gases (GHG) generated by nearly two centuries of fossil-fuel burning. In 1989, the EPA forecast a doubling of that year’s greenhouse gases by 2030.

Wyomingites’ GHG footprint is six times the national average, no thanks to outdated coal-fired power plants that deliver electricity to other states. Yet Governor Mead terms EPA efforts to regulate the plants a “war on coal.” Not to be outdone, Rep. Lubnau (R-Gillette) and Sen. Nichols (R-Laramie) in a recent column decried EPA’s “continual attack on coal.” We must have Pacific export terminals to send more coal to Asian countries; mineral extraction is “part of our culture and our way of life,” the legislators tell us.

Along the same lines, a recent Wyoming Public Media (WPA) forum on the future of coal, sponsored in part by the Wyoming Mining Association, mostly ignored coal’s contribution to the GHG crisis. Not a peep about the UN climate chief’s warnings to the coal industry that, to limit climate chaos, industry must leave most of its reserves underground. Not a peep about encouraging research in, e.g., geothermal energy, which is abundant in Wyoming. Instead, WPA discussed the exigencies of CO2 recycling to “enhance” oil recovery—which, of course, only produces more GHGs.

Wyomingites deserve to hear the rest of the story. It is hoped WPM will offer a follow-up to examine the consequences of our way of life, with a focus on rising temperatures that bring water scarcity and food shortages. Continued mineral extraction only ensures the end of our way of life: a return to the “hunger and harm” of distant memories.