GRAY REED

Climate Change 101 for Landmen and Lawyers: Uninhabitable Earth or False Alarm? (Part 2)

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This is a continuation of a five part series reviewing *False Alarm: How Climate Panic Costs us Trillions, Hurts the Poor, and Fails to Fix the Planet* by Bjorn Lomborg.

EXTREME WEATHER OR EXTREME EXAGGERATION?

About half of Wallace-Wells's book, *Uninhabitable Earth*, is devoted to what he describes as the "Elements of Chaos" that will result from man-made climate change unless fossil fuels are abandoned within the next several decades. This was the part of Wallace-Wells's book that earned him an avalanche of criticism from Lomborg, Shellenberger, and others. As Shellenberger put it (quoting another reviewer), "like other activist journalists, [Wallace-Wells] simply exaggerated the exaggerations. He assembled the best of this already selective science to paint a picture containing enough horror to induce a panic attack in even the most optimistic."

Lomborg likewise says Wallace-Wells exaggerates the problems and devotes the first several chapters of his book, *False Alarm*, to fact checking many of Wallace-Wells assertions, culminating in Chapter IV, "Extreme Weather or Extreme Exaggeration?" A partial list of topics addressed by Lomborg and summaries of some of his comments follow. The headings in quotes are borrowed from the names of chapters in Wallace-Wells's book.

POLAR BEARS

What about polar bears, the iconic metaphor for global warming in Al Gore's *An Inconvenient Truth* that has so distressed children and others the world over? The biggest threat to the global polar bear population, according to Lomborg, is indiscriminate hunting, not global warming. Since nations have regulated hunting of polar bears beginning in the 1960s, their population has increased five-fold, to around 26,500 polar bears in 2019. Because of the increase in the polar bear population, mention of them has decreased among climate activists. There was no reference to them, says Lomborg, in Al Gore's film, *An Inconvenient Sequel*, which came out in 2017. The real threat to polar bears, Lomborg concludes, "isn't climate change, it's people."

"DISASTERS NO LONGER NATURAL"

What about hurricanes? Both Lomborg and Shellenberger cite data indicating that globally such weather events have declined over the past century. The cost of these events, however, has increased significantly. But this is not due to climate change, says Lomborg, this is due to sixty-seven-fold more people living in Florida, as an example, in 2020 than there were in 1900. Globally burgeoning populations on coastlines have led to what Lomborg calls the "expanding bull's eye effect." In reality, says Lomborg, "much (and often all) we're seeing is that more people with more stuff live in harm's way." The solution is not to be found by reducing CO2 emissions, says Lomborg. The solution is "to stop building lots of big, expensive houses in flood zones."

DROUGHT AND "WILDFIRE"

What about drought and wildfires? Lomborg cites the recent US National Climate Assessment (NCA), which states unequivocally that "drought has *decreased* over much of the continental United States in association with long-term increases in precipitation" (emphasis added).

But what about wildfires in California? While Lomborg agrees that climate change is contributing to the problem, he also reminds that, since 1940, the number of homes built in high-risk fire zones in California has risen from half a million to almost seven million in 2010, three times faster than the rest of the US over the same time period. This is another example of the "expanding bull's eye effect" Lomborg cited with hurricanes. The rapid growth in California home building is projected to continue. But to Lomborg this suggests "our first target for reducing wildfire damages to homes . . . [ought to be] to deter people from building houses in high-risk zones."

Shellenberger, a California resident, says much the same thing about California wildfires but adds that, before Europeans arrived in the United States, data shows that fires burned up woody biomass in forests every 10 to 20 years, and fires burned the shrublands every 50 to 120 years. During the last 100 years, however, the policy of the US Forest Service and other agencies has been to extinguish most forest fires when they occur. This is due to concerns about air pollution as well protecting surrounding communities from fire. This policy, however, has resulted in the accumulation of far more wood fuel on forest floors in California and elsewhere than otherwise would exist. Add to that the six million more people living in California today than there were in the year 2000, and the results are not surprising.

Likewise, in Australia, a scientist has estimated there is ten times more wood in Australia's forests than when Europeans arrived, though the Australian government, as in California, refuses to undertake controlled burns for both environmental and human health reasons.

These examples support Lomborg's point that it is over simplistic to blame the wildfires in California solely on climate change. Many politicians in California and elsewhere, however, would prefer not to highlight the non-climate related factors that might cause more wildfires. That might hold them partially accountable for enacting short-sighted policies.

"DROWNING"

What about global flooding? According to Lomborg, Wallace-Wells cites a study stating that coastal flooding caused by sea level rises due to global warming will cause somewhere between $14-$100 **trillion** of damages each year between now and the year 2100. What Wallace-Wells fails to mention, says Lomborg, is the assumption behind these figures that not a single country will ever increase heights of protective dikes beyond current levels or construct new ones. Dikes have been used in the Netherlands and elsewhere in the world to hold back the ocean for hundreds of years. The study that Wallace-Wells cites, says Lomborg, acknowledges this and states that even relatively low amounts of spending on adaptation would lower their estimates by 88 percent.

Wallace-Wells also asserts that if 2°C of warming is reached, the Greenland ice sheet will collapse. In response, Lomborg cites the UN Intergovernmental Panel on Climate Change (IPCC) as saying that, even absent climate control policies, 60-70 percent of the Greenland ice sheet is likely to be around for at least the next thousand years.

"HEAT DEATH"

What about heat waves? Wallace-Wells asserts that, by 2025, 255,000 people will die annually across the world of heat stroke and that, by 2100, half the world's population will be at risk, even if the world pulls up slightly short of 2°C of additional warming. Lomborg counters that Wallace-Wells apparently assumes that no additional air conditioners will be sold over the next 80 years and ignores the technological improvements to air conditioning and building design likely to prevent such widespread deaths. Also, what about the offsetting number of people spared death due to exposure to cold? Lomborg points to a 2015 scientific study indicating that, globally, people are 17 times more likely to die of cold than heat.

SAVE THE RAINFORESTS

What about deforestation's impact on climate change? Lomborg cites studies indicating that, contrary to popular perception, increased CO2 in the atmosphere has greatly boosted global greening due to what agricultural scientists call the "fertilization effect." Not all this new vegetation is optimal—weeds are included—but it is remarkable, says Lomborg, that thanks to carbon dioxide fertilization together with reforestation and expanding cropland, we have added the equivalent of two entire new continents of green over the last few

decades. The media and climate activists, however, rarely acknowledge this. By one estimate, says Lomborg, the world has more green space now than it did around the year 1500, before widespread reduction of global vegetation had begun.

SAVE THE WHALES

What about ocean acidification? The basic problem of ocean acidification comes from the earth's oceans taking up CO2 from the atmosphere. This hurts marine organisms that build their shells from calcium carbonate and helps to destroy ocean reefs and reduce wild fish in oceans, not to mention negative impacts on tourism and recreation. As devastating as this is, Lomborg reminds that two-thirds of the global value of fish produced as food for humans is produced in onshore aquaculture farms where ocean acidification has little to no impact. In a later chapter, Lomborg describes how harvesting oil from algae cultivated on a mass scale on the ocean's surface, a potentially carbon neutral innovation, could have the added benefit of dramatically reducing ocean acidification.

"ECONOMIC COLLAPSE"

One more "Element of Chaos" that Wallace-Wells points to is the economic collapse in the world economy he forecasts unabated climate change is likely to bring about. He cites research on the economics of warming from a trio of UC Berkeley and Stanford economists (Hsiang/Burke/Marshall) that indicates that, for every 1°C of warming, economic growth is reduced by about one percentage point. This is disturbing because economic growth is normally counted in low single digits.

The result, based on projections by Hsiang/Burke/Marshal, is that unmitigated global warming will cause an average 23 percent loss in per capita earning globally by the end of the 21st century, with a 12 percent chance that the decrease could be 50 percent. By comparison, the Great Depression of the 1930s dropped global gross national product (GNP) by 15 percent. Other economists, says Wallace-Wells, believe it could be worse, hastening an economic depression worldwide the likes of which have never been seen.

This is perhaps where Lomborg and Wallace-Wells differ the most when discussing the "Elements of Chaos." Lomborg's perspective is that global GNP has increased inexorably since the Industrial Revolution, and especially in the last several decades, which have seen billions of people lifted out of poverty. Citing the work of Professor William Nordhaus of Yale University, who so far is the only climate economist to ever be awarded a Nobel Prize in economics (in 2018), Lomborg calculates the cost of climate change, even without drastic reductions in fossil fuels, will be about 4 percent of GNP in 2100.

How is this possible, one might ask, given that Hsiang/Burke/Marshall claim that the costs of climate change are so much higher? Because, says Lomborg, when

Hsiang/Burke/Marshall make their case they leave out adaptation, CO2 fertilization, the impact of the “expanding bull’s eye effect,” and the many other factors Lomborg cites in his book. As Lomborg’s critics are fast to point out (more on them later), missing from his analysis, and his argument more generally, is a detailed factoring in of the uncertainties. What if Wallace-Wells is right, and a 4°C temperature increase wreaks unparalleled global havoc? Is an economic decline of only 4 percent credible in such a scenario? This begs the question, are the scientific and other studies Lomborg cites outliers, or are his conclusions supported by credible experts?

Next time, Part III of V: WHAT DO THE EXPERTS REALLY SAY?