Preparedness Matters More than CO2 Targets

Contributed by Aaron G. Lehmer-Chang
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In the wake of another failed climate change summit last month in Warsaw, some fine minds not too weary of persistent ecocide make constructive suggestions. This is what Aaron Lehmer-Chang has done below. At bottom is a Culture Change editorial comment.

If we environmentalists were honest with ourselves, we would have to admit that several decades of heroic efforts to curb carbon emissions have yielded very little progress. Despite repeated warnings from scientists and the inspiring rise of climate activism, global emissions continue to grow, having recently passed the dangerous threshold of 400 parts per million (ppm).

“Passing the 400 [ppm] mark reminds me that we are on an inexorable march to 450 ppm and much higher levels,” says Dr. Michael Gunson of the Global Change & Energy Program. Such views are sobering, to say the least, especially knowing that it takes about four decades for the impacts of prior emissions to take full effect. We’ve already witnessed nearly a 1Ú C increase in average global temperatures from emissions between 1900 and the early 1970s. If you add the emissions “already in the pipeline” over the decades since, we’re almost guaranteed another 0.5Ú C in warming by mid-century. This would take us precariously close to the much-dreaded 2Ú C increase that scientists warn would have “severe climate impacts on social and natural systems.”

Preventing Climate Change No Longer a Viable Strategy

Stabilizing the global climate at or below a 2Ú C increase would require unprecedented cuts in emissions — on the order of 80 percent or more — by 2050. Translated into real-life terms, residents, governments, and businesses the world over would practically need to cease their reliance on fossil fuels in little more than a generation.

Given the anemic international agreements attempted thus far and the glacial pace of progress in Washington, the prospects for meaningful political action seem remote. Moreover, if we were to continue being honest, we’d have to acknowledge that industrial civilization is simply too “locked in” to fossil fuel dependency to cut emissions quickly or deeply enough to prevent climate instability. We’re not only addicted to fossil fuels, the needle is grafted to our collective arm.

Peak Oil Will Curb Carbon Emissions

Thankfully, that one-time reservoir of fossil fuels we’ve been gifted is starting to run dry, which will grant our overtaxed atmosphere some reprieve from carbon emissions in the decades to come. We’re entering a period that petroleum geologists refer to as “peak oil,” that maximum point in production when we can no longer extract oil at rates higher than we have before. It corresponds roughly to the half-way point in our global endowment, which will soon mean that we modern-day humans will have less and less oil and related fossil fuels to work with each and every year.

According to a recent assessment by Europe’s Energy Watch Group, “world [crude] oil production has not increased anymore but has entered a plateau since about 2005.” We can expect crude oil from mature fields to continue to decline, dropping as much as 40 percent by 2030. In another new report, Climate After Growth, Post Carbon Institute’s director Asher Miller and Transition Network founder Rob Hopkins note that the planet’s oil fields are declining at an average rate

of 4 million barrels per day — roughly one-fifth of what Americans consume every day.

In response, oil firms are desperately trying to replace those losses via costly and risky forms of extraction like hydro-fracking and deepwater drilling to reach unconventional forms of energy like shale gas and Canadian tar sands. Great media hoopla has accompanied the resurgence of the US fossil fuel industry from such development. But the Energy Watch Group's analysis reveals that US shale oil will actually "peak between 2015 and 2017, followed by a steep decline," a pattern that's expected to repeat itself globally.

Energy analyst Chris Nelder sums up our present conundrum this way: "Global production will fall when the decline of mature fields overwhelms new additions. When, precisely, that will happen, no one can say for certain. But it's almost definitely before 2020."

Many environmentalists still hold out hope that we can simply "swap in" renewable energy to replace the vast, concentrated energy provided by fossil fuels. We'll need all the solar, wind, oceanic, biomass, hydro, and geothermal energy we can get, but renewable energy (now about 13 percent of global energy use) simply cannot be scaled up at the pace needed to supplant our fossil fuel use — certainly not before the predicted down-curve in available oil and gas supplies.

Shifting the Debate to Infrastructure Transformation

If true, then the question shifts from, "How do we reduce fossil fuel use?" (which will happen anyway) to, "How do we make the best use of what we have left to adapt to climate change and the coming energy crunch?"

Mitigating climate change's worst impacts is critical, especially when they disproportionately affect society's most vulnerable and our vital life-support systems. But the idea that we should simply leave the rest of the recoverable fossil fuels in the ground is starting to sound increasingly naïve and morally questionable. It's naïve because of the sheer inertia we've witnessed during the past three decades in terms of global climate action. To think that will change anytime soon is wishful thinking. And it's wrong because leaving our remaining fossil fuels untapped would consign hundreds of millions, if not billions, of people to their deaths, given how dependent we are on fossil-fueled infrastructure.

What's vital now is shifting our infrastructure away from fossil dependency and migrating threatened coastal communities and economies inland. As fossil fuels decline, we'll need to rehabilitate rural economies, re-nutrify denuded soils, and rebuild diverse local food systems. As the snowpack diminishes from climate change, we'll need rainwater catchment and storage basins, reforested watersheds, and water-efficient irrigation systems. As sea levels rise, we'll need to build more dikes, levees, and channels to protect our cities. We'll need to de-pave many of our streets, highways, and parking lots to free up space for growing food, open up covered creeks, and reseed natural landscapes. We'll need to energy retrofit our buildings, revitalize rail transport lines, convert seafaring vessels to sail, and retool our decaying manufacturing infrastructure.

All of this will require redirecting substantial fossil fuels from wasteful consumption toward these ends. We face challenging times ahead from the global warming that is already coming, along with the consequences of overshooting our planet's resource limits. We must brace ourselves. Instead of saddling future generations with a crumbling, oil-dependent infrastructure, our legacy must be to carefully apply the resources we have left to fertilize, fortify, and beautify our world.

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The above column is from his Dec. 2, 2013 web publication at World Shift Vision. It was reposted from the Winter 2014 issue of the Earth Island Journal.]

Further reading:

From the Guardian, Dec. 2, 2013: COP19: the UN's climate talks proved to be just another cop out

Culture Change comment by Jan Lundberg:

Lehmer-Chang's column is well presented and well argued. Only one bone to pick: “the idea that we should simply leave the rest of the recoverable fossil fuels in the ground is starting to sound increasingly naïve and morally questionable.” Correct, that for some to want to leave recoverable fossil fuels in the ground is naive, when there’s still freedom for the extractors to do their thing. As to morally questionable, this argument is not explained fully. It is morally questionable to burn fossil fuels now, give what we know, period. To come up with a compassionate fossil fuels extraction and combustion schedule for the less fortunate is naive and probably unfair to future generations and definitely toward other species, but perhaps someone will have some success at it. More likely is collapse of the petroleum infrastructure which will also take down coal-burning on the present scale along with most other large-scale activity. Today’s petroleum use is tremendously subsidized, and this is the main reason consumer economies limp along and won’t get the “recovery” that energy ignoramuses toot. Trying to lay out a reasonable and final fossil fuel draw-down is as pointless as putting much hope in the emitter-dominated climate negotiations, given the reality of politics today that diminish the meaning of elections and climate science.

Having vented on that, I love the article. Here is a recent finding that should give people pause when they might be contemplating any delays in fundamental change: New finding shows climate change can happen in a geological instant Oct 07, 2013 by Ken Branson, in phys.org — 13 years for global temperatures rising by 5 degrees centigrade 55 million years ago when CO2 levels doubled? Whoa! Looks like Albert Bates’ plan for everyone in the world planting one tree every day is now called for. That, and somehow seeing the fossil fuel industries end. – Jan Lundberg CultureChange.org and SailTransportNetwork.org