

# THE PRINCETON PACKET

SOLUTIONS

By Huck Fairman

## 'The Uninhabitable Earth' – Life after warming

*"It's worse, much worse than you think."*

This is how the book begins. David Wallace-Wells, journalist and author, wants to be very clear, in his new book, "The Uninhabitable Earth" -very clear that we have brought upon ourselves a new and threatening reality that none of us can escape.

Yes, we can mitigate impacts, if we join together sufficiently, locally, regionally, nationally, globally, and if we direct our democracy to acknowledge and respond. It will also require stark changes in how we generate and use energy and how we treat, and preserve, the natural world – what is left of it. And that too will require political change. While polls have indicated that a significant majority of Americans recognize this, so far that hasn't translated into the political cohesion, and the will to act ... sufficiently.

Part of this reluctance, or hesitancy may result from not clearly understanding not only the coming changes, but the speed at which they are unfolding, already all around us.

Wallace-Wells' book is not intended to be a discussion of the science explaining global warming. Instead it is a detailed look at the impacts upon civilization and the natural world.

To summarize the message from science, he writes:

"In a 2018 paper, 42 scientists from around the world warned that, in a business-as-usual scenario, no ecosystem on Earth was safe, with transformation 'ubiquitous and dramatic,' exceeding ..." prior transformations that oc-

curred over tens of thousands of years.

And Wallace-Wells lays out the historical perspective. The planet has experienced five mass extinctions before – all but one (that triggered by the great asteroid,) produced by greenhouse gases.

Each wiped out most life, and served as an evolutionary reset. In our time, more than half of the carbon released into the atmosphere has been emitted in the last three decades. The Syrian refugee problem, of more than one million, was "inflamed" by climate change, drought in particular. The World Bank estimates that by 2050, in 30 years, we may see 140 million refugees. In 1820, the entire human population was approximately one billion; by the end of our century that number could rise to 11 billion, a majority trying to survive in the southern, hot half of global land masses.

To date, discussions of these possible futures have been dangerously narrow, warns the author. When the 1997 Kyoto Protocol was signed, a rise of 2 degrees Celsius was estimated to bring us to the edge of catastrophe. Now, with very little compliance of the Paris Climate Accord – where almost no industrial nation will meet its emissions reductions goals – climatologists are looking at increases of 3, 4, or 5 degrees Celsius.

Those could render much of the planet uninhabitable. Agriculture will almost certainly be severely reduced. Most large cities will be underwater. What will happen to economies, trade, stock markets ... and all who depend on them?

Wallace-Wells notes that there are two variables we cannot factor into the future predictions: the human response, and nature's response to global changes. Wallace-Wells reminds us that it is not too late to alter our technologies, emissions, and our approaches to the natural world; we can still mitigate future impacts. But we are too late in reacting in order to prevent impacts from the carbon already in the system. That carbon will continue to drive, and intensify, the changes we are now seeing, in heat, storms, ocean rise and acidification, floods, fires and droughts.

One of the great uncertainties in nature is whether, and how much of, the permafrost will melt and release methane – that gas which is even more blanketing than CO<sub>2</sub>.

Once Wells has set the global stage, he describes in more detail how Heat, Hunger, Fires, Fresh water depletion, Ocean warming and dying, bad air, disease, economic collapse and climate conflict will affect civilization. I had to periodically put the book down and play some music, bicycle or take a shower.

It is a daunting future that he details. He does not underplay future or current changes. But he does acknowledge that science, like the global condition it is trying to understand, is "ever-evolving." And he describes some of the steps we can and need to take – "cooperation" being the essential one required to join together, and implement changes

The changes we need to make, that he lists, are not new, but he feels are worth repeating:

carbon taxes (as already exist in a number of countries), phasing out dirty energy and turning rapidly to electric vehicles, solar, wind and other green technologies – all of which are dependent on the political will and "apparatus" to do so aggressively. Other steps must include: carbon capture, public investment, shifting away from beef and dairy, and preservation of large segments of land, oceans and lakes.

Should one wonder where Wallace-Wells gleaned the information he presents, at the end of the book, he provides 66 pages of "Notes," sources and attributions.

Other science writers, and scientists themselves, have hoped that providing people with information about the changes to the natural world we have set in motion, would be enough to galvanize responses, but while there have been a number, they have not reached the level necessary for our survival.

Wallace-Wells clearly hopes that the stark – horrific – portrait he paints of the present and looming future will help stir populations to act – to take the steps necessary to keep the Earth habitable. Our situation, he argues persuasively, could hardly be more serious or urgent. As others have proclaimed, we need the mobilization of everyone – all hands on deck – now, to make the civilization-preserving changes necessary. If this book can contribute to that awakening, which needs to happen very soon, then it – its information and warnings – will join its predecessors in raising that cry.