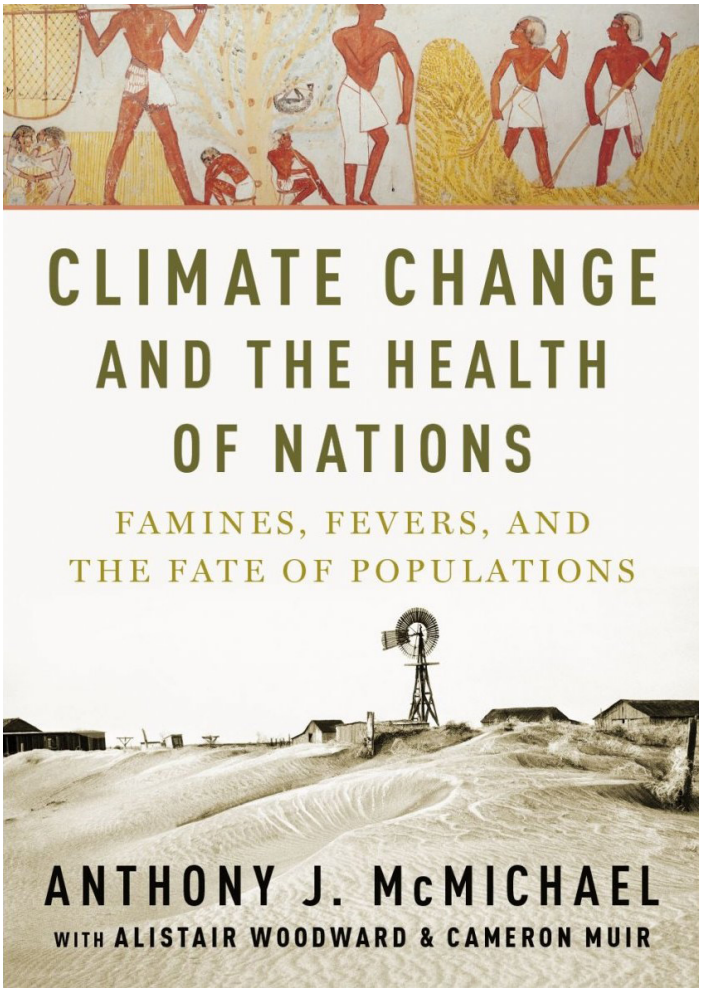
Climate Change and the Health of Nations:
Famines, Fevers, and the Fate of Populations by Anthony McMichael

A Book Review by Easwaran Narassimhan

Projecting the precise outcomes of climate change on the health and economic well-being of humans is integral to conceiving a coherent climate policy, yet forecasts are often associated with uncertainty. Given the complex nature of the problem: as Anthony McMichael points out in his book – Climate Change and the Health of Nations – famines, fevers, and the fate of populations "the Earth system's behavior is less amenable to exact description and measurement, and behavior under future unfamiliar conditions cannot be confidently estimated." As countries work hard to meet their commitments under the Paris Agreement, this unpredictability has become a reason for a deadlock among nations who are finding it challenging to negotiate the finer, disputable aspects of the Agreement. The issue of "loss and damage" compensation to the more vulnerable regions of the world in particular, has become a bone of contention. It is in this context that McMichael's book is unique. Instead of being focused on the clichéd discussions surrounding the science and politics of climate change, it provides an account of how humans have evolved, survived, and struggled in an ever changing global climate. In doing so, he views climate change through a historical lens.



The book begins by exploring how the ever-so-restless global climate has played a pivotal role in shaping many historical events and the fate of various life forms on the planet. McMichael explains how extreme climate conditions have been responsible for most of the natural extinctions and catastrophic transitions since the Cambrian explosion of new life forms around 540 million years ago. In separate chapters, he throws light on how changing climate conditions have coincided with the rise and fall of human civilizations: from the European Bronze Age to the fall of Rome, the Mayans, and the Anasazi to the little Ice-Age that gripped Europe and China. Throughout the book, McMichael emphasizes how temperature anomalies have proven to be a bane for food supply, human health, and economic well-being, and how they have resulted in the evolution of various infectious agents and vectors. The intriguing nature of changing temperature becomes evident as one is exposed to the many natural extinctions that have been followed by either a rapid cooling or a rapid warming period. McMichael also attempts to associate such naturally occurring warming and cooling with the evolution of some human species and de-evolution of others over time. He quotes John Hooker in saying that "every modification of climate, every disturbance of soil, every interference with the existing vegetation of an area, favors some species at the expense of others."

Climate change and the challenges it presents to humankind are not new. Temperature fluctuations during the prolonged Pleistocene cooling period, often referred to as the 'Ice Age,' influenced many different aspects of our biological evolution. The end of this glacial period

ushered in the relatively stable Holocene period we witness today. McMichael calls this the "Goldilocks Zone." This was the period characterized by the development of human civilization, rapid growth in agriculture, extinction of mega fauna, and the spread of cattle herding. However, sudden climate fluctuations in this period have destabilized civilizations with famines, disease, and conflict. For the most part, the human species multiplied in the "just right" conditions that characterized this period. Yet, beginning in the 1980s, human aspirations to accumulate wealth and comfort manifested into a desire for resources began to exceed the Earth's "bio-capacity." As a consequence, there has been a striking acceleration of carbon dioxide emissions, adding a human dimension to the already naturally oscillating climate. The Earth that we see today has transformed to a degree that is pushing us out of the Goldilocks zone. Such movement out of the comfort zone will only put greater stress on social, ecological, and physiological systems. The book illustrates how cooling temperatures forced early Europeans to abandon settlements, ushered in bubonic plague that contributed to the fall of the Roman empire, and severe drought that caused the demise of the Mayan empire. Such examples help us understand what a 2-degree temperature rise may entail in the world we live in.

McMichael gets controversial in the final chapter, asserting that countries have already wasted 25 years arguing about climate science, defending national interests and fretting over the challenges that global warming poses to growth. In fact, the deleterious consequences of our desire to step out of the climate comfort zone are already evident. As a true bio-environmentalist, he writes that "humankind is on a treadmill attempting to produce more food, electricity, housing, [and] safe drinking water for an ever growing population in a market based system that routinely discounts long-term environmental damage of operating beyond earth's bio-capacity." McMichael criticizes the prevailing cornucopian thinking by arguing that technology-dependent ideas impede thinking when it comes to climate action. He instead recommends that efforts to mitigate and adapt to climate change need to emphasize educating people about the harmful repercussions of changing climate: debilitating heat, proliferation of infectious microbes, and loss of agricultural yield. In doing so, he endorses the idea that human beings should be more prudent with the use of resources, and that not all answers can be found in technological evolution. He contends that while the previous generations were comfortable in assuming that they would bequeath a positive legacy to the next generation, our generation cannot afford to be complacent.

The book does not provide much-needed solutions to tackle climate change in a way that takes care of human health and wellbeing. It is bound to get criticism from a wide range of climate and development policy experts who believe that incentivizing cleaner technologies and energy efficiency is a more logical approach to fighting climate change than drastically decreasing consumption of resources that are often necessary for development.

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