



NATIONAL AND INTERNATIONAL CLIMATE ASSESSMENT BACKGROUND v4

IPCC REPORT: “The Impacts of Global Warming of 1.5°C” <http://www.ipcc.ch/report/sr15/> was issued in October 2018 by the UN Intergovernmental Panel on Climate Change (IPCC). This group of over 100 scientist authors undertook the 2-year study to assess whether the target 2°C temperature rise above pre-industrial level set in the Paris Agreement was stringent enough, or if warming needed to be kept to 1.5°C. Sadly, the conclusion was that limiting the rise to 2°C would **not** be sufficient to avert human catastrophe.

Human activities, especially those related to fossil fuel emissions, have already raised average global temperatures 1°C above base pre-industrial levels. And we are seeing the consequences of this today: more extreme storms and flooding, and rising sea levels and melting ice cap [which combine to cause loss of life and property]; more frequent heat waves [which kill vulnerable people directly]; chronic, long-duration drought [leading to food shortages, as well as to mass migration]; large-scale fires [such as in western North America]; increased ocean acidity and ocean oxygen depletion [leading to marine system collapse and causing human food shortages], and species and biodiversity loss [leading to food shortages for humans, and greater risk of disease in vulnerable persons and populations].

We are observing all these consequences today, with just a 1°C rise. The report quantifies the predicted impact of the larger temperature rises. But we can understand logically that an additional 50% or 100% temperature rise would substantially increase the risk to human life and health.

NCA 2018 REPORT: “National Climate Assessment 2018” <https://nca2018.globalchange.gov/> was released November 23, 2018. 13 US government agencies, led by NOAA, with over 300 experts contributed to it. This report notes many of the same consequences as above, as directly related to the US. Additionally, it breaks down the effects by region of the US, eg, more rain and flooding in the Northeast, and more drought and fires in the West, and quantifies the economics. With continued growth in emissions at historic rates, annual losses in the US could reach around \$200 billion by mid-century. The result could be a contracting of US GDP by 10% by century’s end.

Limiting global warming to 1.5°C would require rapid, far-reaching transitions in land, energy, industry, building, transport, and cities. Human-caused emissions of carbon dioxide would need to fall by about half by 2030, reaching “net zero” by 2050. These targets align well with stated goals of states such as New Jersey and others. Carbon pricing should be a component of the solutions; a bipartisan Energy Innovation and Carbon Dividend Act was introduced in both Houses of Congress in late 2018. According to the NCA’s figures, the cost of meeting these targets and avoiding the damages could have a less than 20 year payback period.

THE PEOPLE DEMAND: 70% of people in the US and in NJ are in favor of enacting policies to address climate change. An added bonus of the transition to clean, renewable energy is that virtually all aspects of this transition lead to more, better-paying jobs and a boost to the economy. We agree with the UN General Secretary that this is an “existential threat” to the very next generation of our children or grandchildren, and none of us are exempt because we live in a privileged country. A failure to act to avert this human catastrophe at every level, from the individual to the highest reaches of government, is this generation’s betrayal of all future generations.