Climate change is real

Merriam Webster defines emergency as “an unforeseen combination of circumstances or the resulting state that calls for immediate action.” Does our current climate emergency meet these criteria? A 2019 report authored by 11,258 scientists in 153 countries announced that planet Earth “clearly and unequivocally faces a climate emergency.”

Here is the compelling evidence:

- The warmest years ever recorded occurred from 2015-2020. The year 2020 tied with 2016 as the warmest year in history.

- In August of 2021, the United Nation’s Intergovernmental Panel on Climate Change (IPCC) concluded that the window of opportunity is fast closing to prevent the global rise in temperature from exceeding the critical target of no more than 1.5°C above pre-industrial levels. The IPCC projected that the world could cross this rubicon by the early 2030s—a global inflection point from which there will be no turning back. Many of the changes being wrought now could not be reversed for hundreds or thousands of years. The good news: If global response to cut greenhouse gases (GHGs) achieves the very low emissions levels envisioned in the report, global temperature would reach the 1.5°C warming level for a few decades, and then fall below this level by the end of the century.

- Climate change threatens human health worldwide, from food insecurity, disease and impacts on mental health, to air pollution, extreme weather and forced relocations. The United Nations High Commissioner for Refugees reports that over 20 million people are now being forced to leave their homes each year due to extreme climate-change weather and related events, including rising sea levels, torrential rainfalls, severe droughts, unprecedented fires, desertification and catastrophic weather such as hurricanes and cyclones.

- In recent years, climate change-driven fires have raged. Of the 20 most destructive fires in California’s history, 14 have occurred since 2007, driven by the hotter, drier weather brought on by climate change. In 2018, alone, fires in California burned 1,893,913 acres, killed 103 people, destroyed 22,751 buildings, displaced more than 150,000 people from their homes and razed the northern town of Paradise—all at a cost of over $3.5 billion.

- Unsustainable forms of agriculture, forestry and other uses of land are increasing hunger worldwide and generating 1/4th of total global GHG emissions, nearly the same volume as generated by the production of heat and electricity. More than 800 million people experienced hunger in 2020.

- Climate change is an inequitable crisis. Some 70 percent of global GHG’s are emitted by countries that are the ten largest polluters. Meanwhile, GHG’s emitted by the 100 countries generating the least emissions comprise just 3 percent of the world’s total.

- Coastal flooding and flooding along swollen rivers due to the extreme weather events and rising sea levels generated by global warming is destroying countless homes, upending lives around the world and forcing millions of people to relocate, many permanently. For example, in recent years dozens of communities, situated up and down the Eastern U.S. Seaboard, tied or set new records for the duration of flooding at high tide, including many floods during storm-free periods. Within 30 years, rising sea levels due to climate change could cause low-lying coastland inhabited by 300 million people worldwide to experience chronic flooding. The coastal homes of 200 million people could be permanently flooded by 2100. Island nations, such as Madagascar and the Maldives, are extremely vulnerable due to the rising sea levels and devastating cyclonic activity caused by global warming.

- We’re in the midst of the world’s sixth great extinction—driven by human activity and the impacts we’re having on the global environment—many of which have been catalyzed by climate change. The United Nation’s Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) found that more than 1 million species of plants and animals are threatened with extinction in the near future. This is the greatest number since humans have walked the planet. According to the EPA and other conservation and research organizations, from 1,300 to 1,500 North American species of plants and

See CLIMATE CHANGE - Page 5D

The VIEW

from here

MICHAEL CADUTO
CLIMATE CHANGE

From Page 4D animals are now threatened or endangered.

- IPCC studies predict that the global mean temperature of the oceans is expected to rise from 1-4°C by 2100. As global warming has intensified, oceans have acted as a thermal buffer, absorbing a tremendous amount of heat that would have otherwise caused global warming to advance much more quickly. But ocean warming causes coral bleaching, degradation of breeding habitat for marine animals and promotes the spread of disease in marine species. Warmer water holds less oxygen, becomes more acidic and expands in volume, adding to sea level rise and the loss of critical coastal habitats such as salt marshes and other critical estuarine ecosystems.

- Evidence now clearly shows that carbon dioxide, methane and other greenhouse gas (GHG) emissions generated by engines of the industrial age are causing temperatures to increase at a rate well beyond what forests can adapt to. Atmospheric levels of GHG’s are now higher than they have been in 2 million years. U.S. Climatological Network Data reveals that the mean annual temperature has increased by 3.8 degrees since 1835, with 70 percent of this rise occurring since 1970. Climate change and other sources of stress are the probable cause of a significant drop in the sugar content of maple sap during the past 35 to 40 years. In the 1970’s it took 25 to 30 gallons of raw sap to make 1 gallon of syrup. Nowadays, 45 to 50 gallons of sap must be boiled away to produce the same yield.

Considering the two computer models used in a New England regional climate assessment study, Barry Rock, Professor Emeritus of Natural Resources for the Institute for the Study of Earth, Oceans, and Space at the University of New Hampshire in Durham, predicts that “Within the next 100 years, Boston could have a climate similar to either Richmond, Virginia, or Atlanta, Georgia.” These computer models project that the average regional temperature will rise between 6 and 10 degrees over the next century.

- Climate-driven storms now cause millions of dollars in damages throughout Vermont each year. Locally, these storms are demanding far more winter road maintenance and materials (such as sand and salt), increasing winter road budgets well above normally expected levels. Nick Clark, a member of the Thetford Select Board, conducted a detailed study of the impacts of climate-change driven extreme weather events on Thetford’s road maintenance expenses. Clark reported that, “Thetford spent roughly 27.8 percent more in the winter of 2018/19 ($201,911.02), where there were more days with dramatic temperature swings, than in 2017/18 ($157,997.49), where swings were fewer. Salt and sand costs for the winter of 2018/19 represented roughly one-fifth of Thetford’s total Public Works budget.”

Clark also reported that, “In Thetford, in the 2018 calendar year, the town paid $61,177 in disaster-related loan interest. The 2018 interest payments alone represented 5.6 percent of the town’s total Public Works budget. The interest payments represented in themselves a 5.9 percent increase over the previous year’s Public Works budget. A property assessed at $250,000 paid an additional $43.25 in property taxes.”

From Vermont to West Africa, and from the Arctic to Australia, climate change is impacting people, plants, animals and environments around the globe. Our response to climate change today will determine the health, happiness and safety of future generations.

Next week: What can you do about climate change?

Michael Caduto, executive director of Sustainable Woodstock, brings nearly 30 years of experience as an environmental advocate, educator and writer. He has devoted his life to bringing people closer to the natural world and helping others better understand the role that we all play in its stewardship. His books include the Keepers of the Earth series (co-author); Catch the Wind, Harness the Sun and Through a Naturalist’s Eyes.

STAUDTER

From Page 4D one reason the rest of us suffer crappy care is because you feel your liberty is being trampled on.

It seems to me that because you won’t get a shot, or wear a mask, and go through life like it’s all a hoax, that it’s my liberty, not yours that you’re treading on. When you go into your workplace, it’s your coworkers that you’ve taken the liberty from. When as customers you go into a retail setting without a mask, once again you’re taking the right to choose away from fellow shoppers, the retail employees, and you put yourself at risk.

A friend of mine has a one-liner that sums this up. Throughout history there have been times when Mother Nature has cleaned house. He said, “Perhaps it’s time again to thin the herd, and oh look, we have volunteers!” I don’t want to lose you. Please get vaccinated, and if you don’t want to do it for yourself, do for those you love.

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