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WORLD SCIENTISTS' WARNING TO **HUMANITY: A SECOND NOTICE**

HON, PETER A. DeFAZIO

OF OREGON

IN THE HOUSE OF REPRESENTATIVES Wednesday, June 12, 2019

Mr. DEFAZIO. Madam Speaker, climate change is an existential threat to all of humanity, and it is essential that we start acting-now-to stop and reverse the destructive effects of climate change.

In 2017, Oregon State University Professor Dr. William Ripple published "World Scientists' Warning to Humanity: A Second Notice," which has been endorsed by more than 15.000 scientists from 184 countries. He outlined the irrefutable proof of the damage climate change has caused over the last twentyfive years. He also provided effective steps we can take to combat climate change.

I urge my colleagues to read his report and take action before it is too late.

WORLD SCIENTISTS' WARNING TO HUMANITY: A SECOND NOTICE

(By William J. Ripple, Christopher Wolf, Mauro Galetti, Thomas M. Newsome, Mohammed Alamgir, Eileen Crist, Mahmoud I. Mahmoud, William F. Laurance, and 15,364 scientist signatories from 184 countries.)

Twenty-five years ago, the Union of Concerned Scientists and more than 1,500 scientists, including the majority of living Nobel laureates in the sciences, penned the 1992 "Scientists' Warning to Humanity". These scientists called on humankind to curtail environmental destruction and cautioned "a great change in our stewardship of the Earth and the life on it is required, if vast human misery is to be avoided." In their manifesto, they showed that humans were on a collision course with the natural world. They expressed concern about current, impending, or potential damage on planet Earth involving ozone depletion, freshwater availability, marine fishery collapses, ocean dead zones, forest loss, biodiversity destruction, climate change, and continued human population growth. They proclaimed that fundamental changes are urgently needed to avoid the consequences our present course would bring.

The authors of the 1992 declaration feared humanity was pushing the Earth's ecosystems beyond their capacity to support the web of life. They described how we are fast approaching the many limits of what the planet can tolerate

without substantial and irreversible harm. They pleaded that we stabilize the human population, describing how our large numbers—swelled by another 2 billion people since 1992, a 35% increase—exert stresses on the Earth that can overwhelm other efforts to realize a sustainable future. They implored that we cut greenhouse gas (GHG) emissions and phase out fossil fuels, staunch deforestation, and reverse the trend of collapsing biodiversity.

On the 25th anniversary of their call, we look back at their warning and evaluate the human response by exploring available timeseries data. Since 1992, with the exception of stabilizing the stratospheric ozone layer, humanity has failed to make sufficient progress generally solving these foreseen environmental challenges and, alarmingly, most of them are getting far worse. Especially troubling is the probability of catastrophic climate change due to rising GHGs from burning fossil fuels, deforestation, and agricultural particularly from production, ruminants for meat consumption. Moreover, we have unleashed a mass extinction event, the sixth in roughly 540 million years, wherein many current life forms could be annihilated or at least committed to extinction by the end of this century.

Humanity is now being given a second notice as illustrated by these alarming trends. We are jeopardizing our future by not reigning in our intense but highly uneven material consumption and by not perceiving continued rapid population growth as a primary driver behind many ecological and even societal threats. By failing to adequately promote family planning, implement carbon taxes, incentivize renewable energy, and set aside substantial swaths of habitat in well-protected reserves, humanity is not taking the urgent steps needed to safeguard our imperiled biosphere.

As most political leaders respond to pressure; scientists, media influencers, and lay citizens must insist that their governments take immediate action, as a moral imperative to current and future generations of human and other life. With a groundswell of organized grassroots efforts, dogged opposition can be overwhelmed and political leaders compelled to do the right thing. It is also time to reexamine and change our individual behaviours, including limiting our own reproduction (to replacement level, at most) and drastically diminishing our consumption of fossil fuels, meat, and other resources.

The rapid global decline in ozone-depleting substances shows that we can make positive change when we act decisively. We have also made advancements in reducing extreme poverty and hunger. Other notable progress includes: the rapid decline in fertility rates in some regions attributable to investments in girls' and women's education, the promising decline in the rate of deforestation in parts of the Amazon (which might still be reversed), and the rapid growth in the renewable-energy sector. We have learned much since 1992, but the advancement of urgently needed changes in environmental policy and human behavior is still far from sufficient.

Sustainability transitions come about in diverse ways and all require civil-society pressure and evidence-based advocacy, political leadership, and a solid understanding of policy instruments, markets and other drivers. A dozen examples of diverse and effective steps humanity can take to transition to sustainability include: 1) prioritizing the enactment of connected reserves for a significant proportion of the world's terrestrial and marine habitats, 2) maintaining nature's ecosystem services by halting conversion of forests, grasslands, and other native habitats; 3) rewilding regions with native species, especially apex predators, to repair damaged ecosystems; 4) developing and adopting adequate policy instruments to redress the current poaching crisis and the exploitation and trade of threatened species; 5) reducing food waste through education and better infrastructure; 6) promoting dietary shift towards mostly plant-based foods; 7) further reducing fertility rates by ensuring women have access to education, family-planning services, especially where such resources are still lacking; 8) increasing outdoor nature education for children; 9) developing progressive tax incentives for reducing 10) reducing overconsumption; consumption rate of raw commodities by banning planned obsolescence of goods; 11) and promoting devising technologies and massively adopting renewable energy sources; and 12) estimating a scientifically defensible, sustainable human population size for the long-term while rallying nations and leaders to support that vital goal.

To prevent widespread misery and catastrophic biodiversity loss, humanity must practice a more environmentally sustainable alternative to business-as-usual. prescription was well articulated by the world's leading scientists twenty-five years ago, but in most respects, we have not heeded their warning. It is about to be too late to shift course away from our failing trajectory, and time is running out. We must recognize, in our day-today lives and in our governing institutions, that the Earth with all its life is our only home.