American Fisheries Society

Organized in 1870 to Promote the Conservation, Development and Wise Utilization of Fisheries

425 Barlow Place, Suite 110, Bethesda, Maryland 20814-2199

301-897-8616 | FAX 301-897-8096 | www.fisheries.org

Leanne Roulson
President 2021-2022

Douglas J. Austen, Ph.D.
Executive Director

September 21, 2021

The Honorable John Kerry
Special Presidential Envoy for Climate
U.S. Department of State

Dear Special Envoy Kerry:

In advance of the United Nations' Climate Change Conference (COP26) in Glasgow, UK, the American Fisheries Society (AFS) would like to make you aware of the global consensus of aquatic science societies on the effects of climate change on fisheries and other aquatic resources and the urgency of reducing carbon emissions to ensure the sustainability of this vital global food source, the loss of which could undermine international security and peace efforts. We also seek to underscore the importance of protecting the integrity of healthy aquatic ecosystems and restoring degraded systems in order to maintain their crucial storage of carbon as part of halting and eventually reversing the effects of climate change. We applaud the commitment of the U.S. to securing global net zero greenhouse gas emissions by 2050 and we urge your leadership on the world stage in achieving this goal to hold temperature rise to 1.5 degrees.

AFS is the world's oldest and largest fisheries science society. Founded in 1870, the mission of AFS is to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals. With five journals, a monthly magazine, in-house book publishing with over 200 titles, and the world's largest fisheries science conferences, AFS is the leading source of fisheries science and management information in North America and around the world. We support and promote the use of best-available science in policy-making.

Last fall, AFS and 111 other science societies representing 80,000 scientists across the world called for urgent action to reduce emissions to avoid catastrophic impacts to commercial, recreational, and subsistence fisheries, human health, and global economies. Attached please find the statement that details the irreversible impacts to freshwater and marine ecosystems, fish, and fisheries from climate change that are projected to occur without swift and resolute action to curtail greenhouse gas emissions. We must act now to safeguard our drinking water, food supplies, and human health and well-being.

Urgency of Carbon Emission Reductions

Scientists are already observing significant changes to freshwater and marine species as a result of climate change. Today, freshwater fish species are already imperiled as a result of pollution, habitat loss, water withdrawals, and invasive species. Highly valued fisheries will be further stressed by climate change as it accelerates and intensifies water pollution, species range reductions, species extinctions, and facilitates invasive species expansion to the detriment of native species. Climate change is warming rivers, lakes, and streams and altering precipitation patterns throughout America, reducing habitat availability for fish, particularly for coldwater species. Climate change is also altering marine and coastal ecosystems with significant implications for wild capture fisheries and marine economies. Projected increases in ocean temperature are expected to reduce the maximum catch potential in most areas of the U.S. and this trend is

American Fisheries Society
Organized in 1870 to Promote the Conservation, Development and Wise Utilization of Fisheries
425 Barlow Place, Suite 110, Bethesda, Maryland 20814-2199
301-897-8616 | FAX 301-897-8096 | www.fisheries.org

Leanne Roulson
President 2021-2022

Douglas J. Austen, Ph.D.
Executive Director

anticipated around the world. Many harvested stocks are already shifting towards cooler and deeper water and will continue to shift from one area to another, or even across international boundaries with implications for seafood supply, ports, and associated businesses. Loss of habitat from sea level rise will lead to declines in the vast majority of commercially and recreationally harvested marine finfish and shellfish that are dependent on estuaries and coastal systems for some stage of their life cycle. Increased carbon dioxide absorption is changing ocean chemistry, rendering some waters too acidic for marine organisms with calcium-based shells, such as oysters and clams, and threatening the base of the marine food web.

Many of these changes are and will be irreversible. They will continue to worsen if we persist on our current trajectory with a mounting toll on vulnerable ecosystems, human societies, and local and global economies. In the U.S., commercial and recreational fishing supports more than 1.74 million jobs and results in more than $244 billion in sales per year. Globally, fisheries provide quality protein sources not easily replaced by terrestrial sources. According to the Food and Agriculture Organization of the United Nations, fish accounts for 17% of animal protein consumed globally, fishing and aquaculture directly employ nearly 60 million people, and global trade in fish products is valued at US$152 billion per year. Globally, the loss of fisheries resources could have serious consequences for international security and peace.

Mitigation and Adaptation to Help Protect Aquatic Resources

As part of any climate solution, we must protect the integrity of our healthy aquatic ecosystems and work to restore degraded systems in order to maintain their crucial storage of carbon as part of halting and eventually reversing the effects of climate change. Land and water-based conservation solutions are critical to capture carbon and to make our rivers, lakes and streams, forests, grasslands, wetlands, and coastal systems more resilient to the impacts of climate change. To the extent possible, we must mitigate the impacts of climate change on fish and fisheries and plan for adaptation required to ensure the long-term health of freshwater, coastal, and marine ecosystems.

We applaud the commitment of President Biden to achieve significant reductions in greenhouse gas emissions to address the climate crisis and urge your continued leadership on the global stage. The economic and environmental value of the ecosystem services provided by global aquatic resources is of great importance and must be safeguarded.

Sincerely,

Douglas J. Austen, Ph.D.
Executive Director