

Rivers and Freshwater Are Critical to Life and Must be an Integral Part of Climate Policy

“Water is the primary vehicle through which we feel the impacts of climate change. To effectively address both water and climate challenges, we must bring climate change and water to the same table – into the same conversation: tackling them as one.”

— World Meteorological Organization

The Climate Crisis is a Water Crisis and a River Crisis

Rivers are essential to life. In the United States, two-thirds of population receive their drinking water from rivers. These arteries carry clean water throughout the country, provide refuge and habitat corridors for wildlife, sustain irrigation, and fuel economies, recreation, and transportation.

Rivers have always been critical infrastructure. People have long established communities adjacent to the banks of rivers. Evidence of sophisticated irrigation systems, terraced farms, fishing sites, and trade centers date back thousands of years. River networks have provided routes for commerce, exploration, hunting, and cultural traditions. They are a direct source of drinking water and provide essential recharge to groundwater aquifers.

Rivers are connectors. They link mountains to the sea, map migration routes for birds, fish and animals, and travel routes for people. The reciprocal relationship between rivers and humans has always played a central role in the development of communities, economies, and agriculture.

Today, the river veins that support the entire nation are buffering the most severe impacts of climate change, but without attention, they will suffer and fail – as will we. As the climate changes, shifts in the water cycle spark droughts, floods, extreme weather events, and fires that bring catastrophic transformations to the landscape, wetlands, and rivers.

Rivers and Clean Water are at Risk

In August 2021, the Intergovernmental Panel on Climate Change (IPCC) released its [Sixth Assessment Report](#) on the physical science basis of climate change. The findings in the report were uncompromising and grave. Human influence has, without a doubt, warmed and changed the atmosphere, ocean, and land. The scale of change is unprecedented and human-induced changes are sparking weather and climate extremes in every region of the globe.

Given the vulnerability of water to increasingly severe climate impacts, rivers are even more acutely at risk and must be at the core of strategies to mitigate and adapt to climate change. With water as the primary expression of climate change, rivers are the canary in the coalmine because they incorporate and express changes across diverse landscapes, communities, and ecosystems.

Six Required Strategies

To slow the pace of climate change, address its far-reaching impacts, and reduce carbon emissions, we must commit to strategies that protect freshwater from climate impacts and enhance resilience to on-going changes.

We must also acknowledge that while climate change effects are indiscriminate in their range across the globe and U.S., the intensity of the impacts vary among communities, and are particularly severe in Black, Brown and other communities of color as well for Indigenous tribes who often live next to and have been dependent upon rivers for centuries. Commitments to protect rivers and clean water must be grounded in actions to address systemic conditions of inequity and injustice. To do this, the following six no-regrets strategies must be implemented at scale and with urgency:

1. Safeguard Clean Water

Human beings can survive without a lot of things. Safe, clean water isn't one of them. Actions to protect and restore clean water need to focus on slowing stormwater run-off, managing agricultural runoff, preventing toxic chemicals and nutrients from entering rivers, creating and protecting stream buffers to keep the water at appropriate temperatures for sustaining fish and wildlife habitat, and financing and prioritizing water infrastructure to ensure all communities have reliable access to clean water. Each of these actions are critical to community health and quality of life for humans, animals, and plants.

2. Manage Water for All

To address inequity in water availability, improve water quality, reduce flooding, and avoid water supply scarcities, decision-making and management must be inclusive, representative, and responsive to all communities. Policies must ensure that groundwater pumping, river diversions, and water use is within the limits of sustainability and prioritizes needs for human health, livelihoods, and river ecosystems.

3. Restore Damaged Rivers and Reconnect Habitats

To safeguard healthy communities, sustainable approaches to river management must allow for natural river functions, reconnect floodplains, restore wetlands, and remove unnecessary dams. Bringing damaged rivers back to life reconnects habitats and revitalizes biodiversity from freshwater mussels to salmon. River restoration and management actions must include leadership of Indigenous Tribes and historically under-represented voices.

4. Protect Healthy, Free-Flowing Rivers and Headwaters

Headwater streams and healthy, free-flowing rivers bolster climate resilience and foster adaptation options to adjust to on-going changes. Protected rivers and headwater streams often encompass traditionally indigenous lands and provide a host of benefits including clean water, reliable water supplies, and refuge for a diverse array of species. Critically important for both stream and terrestrial food webs, headwater streams support the smallest to largest species. In addition, healthy rivers and connected floodplains and wetlands absorb and mitigate flooding, rapid snowmelt, and extreme storms, thereby diminishing the risk of harm to people and property.

5. Reform Hydropower Dam Operations

Hydropower operations have caused substantial negative impacts to our nation's rivers and Indigenous communities and must be reformed. This begins with a commitment for no new dams. For the current slate of hydropower dams, they should not be labelled "clean" or "green" because of the damage dams cause rivers and Global Greenhouse Gasses (GHGs) produced

by many reservoirs. Regulatory processes and policies must factor in methane (a harmful GHG) from hydropower by assessing, tracking, reporting, and mitigating emissions. At a broader scale, dam management should be considered and implemented from a basin-wide perspective to minimize impacts to rivers and Tribal lands, as well as maximize habitat connectivity, biodiversity, human health, and equity.

6. Ensure Equitable and Just Access

While climate change impacts are changing every corner of the globe and the U.S., the intensity of the impact varies broadly. Indigenous Tribes and Black, Brown and other communities of color have older infrastructure and fewer resources to weather the impacts of climate change. River and clean water restoration, protection and management actions must be guided by leadership of all communities and include wisdom of cultures that have inhabited these lands for millennia.

About American Rivers

American Rivers believes a future of clean water and healthy rivers everywhere, for everyone is essential. Since 1973, we have protected wild rivers, restored damaged rivers and conserved clean water for people and nature. With headquarters in Washington, D.C. and 300,000 supporters, members and volunteers across the country, we are the most trusted and influential river conservation organization in the United States, delivering solutions for a better future. Learn more at www.americanrivers.org.

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