February 2022 IPCC report

Water-Climate Talking Points

On February 28, the Intergovernmental Panel on Climate Change (IPCC) will release a new report emphasizing the serious damage climate change is already causing, and the need to do more to prepare for increased heat, drought, flooding and fires. It will also discuss the limits of adaptation.

The report will note that climate change exposes existing injustice, hitting marginalized communities the hardest. The worst damage isn't just driven by extreme weather–it's the combination of climate disasters and poor (often discriminatory) planning and policies that put people in harm's way.

It will cover both drought and flooding in North America, and discuss impacts to drinking water, farming, public safety, fish and wildlife, and more. It will also look at solutions, describing ecosystem protection/restoration and "inclusive water regimes" as strategies for resilience.

Below, we offer some talking points about water-climate challenges and solutions.

Topline Message

The latest IPCC report shows we haven't done enough to protect our communities and ecosystems from climate-driven destruction. We must act now to fix outdated infrastructure, implement nature-based solutions, and follow the leadership of Indigenous and other frontline communities.

Climate change is water change

- Climate change is driving more extreme weather in communities across the country, from megadroughts to super storms.
- In the West, rising temperatures are melting snow, making soil and plants thirstier, and increasing evaporation,
- As drought and heat deplete reservoirs, many cities and farms are drilling deeper to tap dwindling groundwater reserves, leaving some rural families with dry wells.
- Drought also affects water safety by concentrating contaminants and allowing salt water to seep into aquifers.
- While some parts of the US are struggling with too little water, others have too much.
    - Last year, Detroit had its second "500-year flood" in seven years, and Hurricane Ida flooded streets and basements from New Orleans to New York City.
    - Low-income people and people of color are most likely to live in flood-prone areas, and disaster aid often deepens inequity.

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Our infrastructure must change with the climate

- From sewage spills to dry wells and burst pipes, our water and sanitation systems are failing in extreme weather.
- Much of the infrastructure built in the 20th century was designed to control water, but many experts are urging a shift towards green infrastructure that works with nature.
- That means re-wilding rivers, protecting forests and wetlands from development, rebuilding soil health, and replacing pavement with plants.
- Rehydrating the landscape with green infrastructure will help the ground soak up both water and carbon, turning it from a gray funnel into a green sponge.
- Natural infrastructure does triple duty:
    - In wet areas, it helps to filter out pollution and reduce flooding.
    - In dry areas, it can catch and hold rain while reducing heat and wildfire risk.
    - Everywhere: healthy landscapes soak up carbon.
- Research shows that natural solutions to climate-driven extremes cost about half as much as traditional infrastructure, but states are still underspending in this area.
- The current wave of infrastructure spending can advance equity and resilience by prioritizing multi-benefit projects in disinvested areas like Indian Country, California's Central Valley and the Gulf South.

Future-proofing our water system

- In the arid West, communities are facing a choice: develop new water at any cost, or stretch (and more equitably share) current supplies.
- The IPCC warns that some water projects, like seawater desalination and dams, can be maladaptive, making one problem worse to solve another.
    - Seawater desalination is energy-intensive and coastal plants are vulnerable to flooding as sea levels rise.
    - New dams emit methane and further strain fisheries stressed by rising temperatures and dwindling flows.
- By contrast, water conservation is a win-win, saving both energy and emissions.
    - Studies show we can decrease water use even as populations grow.
- Some communities are also looking at renewable energy opportunities in the water sector, including solar canals and in-pipe hydropower.
- In addition to modernizing infrastructure, communities must update water laws designed for a climate that no longer exists.
    - Smart water management will require better data about rainfall, streamflow, water use, and more.
    - It also means following the lead of Indigenous communities that have been taking care of lands and waters for millennia.

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