Water and Climate Change: What’s the Connection?

The water cycle is the lifeblood of the world. According to the UN, it is the primary link between climate, human society, environment, food, and economic development. The twin threats of the global water and climate crises carry tremendous peril, particularly for the world’s poor.

The Intergovernmental Panel on Climate Change (IPCC) notes that climate change affects fresh water systems around the world, leading to desertification, floods, melting glaciers and more. Less discussed is that our collective mismanagement of fresh water is a significant cause of climate change and global warming. To successfully reverse climate change, we need a radical rethinking of how we protect watersheds and share our water commons.

Reducing CO2 and sequestering carbon through forest management were key climate mitigation strategies discussed at COP15 in Denmark. Yet, a forest-based, carbon sequestration strategy makes little sense unless copious amounts of water necessary for forest life are safeguarded. Getting to 350 parts per million of CO2 cannot be separated from careful and massive restoration of the earth’s ailing watersheds. Climate change mitigation and adaptation strategies must be based on a holistic understanding of the planet’s inter-dependent ecosystems, using water to mitigate the climate crisis. Most proposed solutions do not this.

A Pan-Asia Water Colloquium entitled, “Water: Common Good, Public Management and Alternatives” declared that ‘water is life’, a commons whose nurturance is the responsibility of all humankind. This commons worldview asks us to grapple with questions generally shunted aside in Copenhagen: How can our water commons – the watersheds and the waters therein – be managed and governed to achieve climate and water justice and stop rampant water abuse? And, what democratic institutions, laws and regulations best ensure water equity and sustainability for people and ecosystems?

The science -hydrology lessons about climate and water

Painting borrows from nature. The yellow of the sun combines with the blue of water to create the green of our living world. Remove blue or green from the earth and the yellow heat makes short work of the earth.

The living world influences the climate mainly by regulating the water cycle and the huge energy flows linked to it. If vegetation is removed, natural biosphere regulation is interrupted. Urbanization, deforestation and wetland destruction destroy water-retentive landscapes and lead to the loss of precipitation. Cloud vapors blow away, creating desert. The natural sequestration of carbon in the soil is undermined. Dry lifeless soil traps solar heat, increasing temperature and reducing precipitation over the affected areas.
Manage our water as a commons: Concrete steps to revive climate and water

Governments worldwide must acknowledge the water crisis before them and the role that our consumption of water-intensive goods and services plays in drying the planet. Fundamental – perhaps painful – restructuring of production and consumption practices is unavoidable.

To ensure ecosystem health and a water-cooled planet, watersheds themselves, including the water that runs through them, must be managed as a commons so that the public good can prevail over poor private and public land and water use decisions.

Reverse the alarming trend towards water privatization. Mounting evidence on privatization shows that: 1) water conservation incentives are inadequate; 2) private financing is too expensive for infrastructure requirements; 3) access to water is woefully inequitable; and, 4) corruption is frequent and privatization is not conducive to local and democratic water governance.

Implement regulations that ensure groundwater withdrawals do not exceed the rate of natural recharge, without which there will not be enough water for future generations.

Hold industry, agriculture, and sprawling municipalities to sustainable water use and non-contamination standards – which means implementing existing water and public health regulations and enacting new laws where necessary.

Reverse current unsustainable water use patterns of industrial agriculture. Abandon carbon sequestration strategies based on plantation-style reforestation. Instead, implement International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTAD) recommendations providing institutional support for ecologically-appropriate agriculture that sequesters carbon and decreases agriculture’s carbon footprint.

Support small farmers, fisherfolk, pastoralists, indigenous peoples, and rural women to effectively steward watersheds through agro-ecology and agro-forestry, by preventing corporate land and water grabs and via comprehensive land reform.

Create democratic watershed committees that include upstream water stewards in water management, even in urban areas. Just as best thinking in forestry management now recognizes the critical role of communities living in and around forests in stewarding this common resource, we must value rural communities’ role in maintaining our watersheds. Support programs must strengthen, not undermine traditional rural livelihoods.

Mitigate water conflicts via democratic, legally-recognized, watershed management bodies that can work across political boundaries to ensure coordinated water use between up and downstream communities. Manage water as locally as feasible. Reduce instances of water transfer from one part of a watershed to another as these transfers play havoc with nature’s ability to regulate the water cycle and climate.

End extractive mining and processing practices that contribute to climate change. Enforce strict water and air contamination and human rights standards.

Reject large hydro-electric dams as part of the energy and irrigation solution, but rather recognize them as part of an ecological and human rights problem.

Ring the world’s cities with green conservation zones. Through smart urban planning, allow rainwater to remain in local watersheds.

Build powerful climate and water justice movements that grow stronger through combining these intertwined issues. Work both within the flawed United Nations Framework Convention on Climate Change (UNFCC) as well as through creative outsider strategies.

Attempts at reversing greenhouse gas emissions and fossil fuel dependence alone will not stop climate change. Climate solutions cannot be successful without stopping water abuse. Sustainable and democratic water governance is a must for achieving climate justice!

Climate justice movements will be far more powerful when they include the earth’s 6 billion water consumers. Please join us in turning around the abuse of our climate and water through bold organizing for commons-based water management practices.