Article Three

HOW WILL CLIMATE CHANGE IMPACT ACCESS TO WATER?

It's official
According to NASA and the National Oceanic and Atmospheric Administration (NOAA) 2016 was the warmest year on record since 1880. 2016 is the third year in a row to set a new record for global warming, with 16 of the 17 warmest years occurring since 2001. (Source: http://www.nasa.gov/press-release/nasa-noaa-data-show-2016-warmest-year-on-record-globally)

Climate change, as evidenced by global warming, threatens the availability of fresh water, access to water and even the quality of the water we use to drink, cook with, bathe, generate electricity or irrigate fields. A decline in potable water (drinking water) is expected for these reasons: municipal sewer systems may overflow during extreme rainfall events, gushing untreated sewage into drinking water supplies; an earlier spring melt and higher temperatures may reduce the mountain snowpack reducing drinking water downstream; glaciers are receding which threatens water supplies for many people; and rising sea levels my cause salt water to contaminate groundwater drinking supplies, especially in coastal regions. (Source: http://www.climatehotmap.org/global-warming-effects/water-supply.html)

However, scientists, researchers, and conservationists are working on ways to mitigate the effects of climate change and the limitations to water access. The best solutions are those which are collaborative and multi-dimensional because there is no one single solution to global warming. Solutions include: increasing energy efficiency; moving away from fossil fuels (especially coal) and toward renewables such as solar, geothermal, wind and energy; developing energy-efficient mass transit systems; reducing emissions from deforestation; and ensuring sustainable development. (Source: http://www.climatehotmap.org/global-warming-solutions/)

Since human demand is one of the drivers of water scarcity, another possibility is to develop reservoirs to store freshwater, pipelines to transfer it, and desalination to recover freshwater from the sea. Water saving, recycling, and reuse are other options to consider. Investments in education and research will be necessary if we want to develop the expertise, skills and technology to avoid increasing water shortages. (Source: http://www.theguardian.com/environment/2012/nov/30/climate-change-water)

Facts About Water

1. 884 million people in the world lack access to safe water supplies.
2. More than 840,000 people die each year from water-related disease.
3. Nearly two out of three people who need safe drinking water survive on less than $2 a day.
4. In many developing countries, millions of women spend several hours a day collecting water from distant, often polluted sources.
5. Clean water is one aspect of improving sustainable food production to reduce poverty and hunger.
6. More than 80 percent of sewage in developing countries is discharged untreated, polluting rivers, lakes and coastal areas.
7. By 2025, 1.8 billion people will be living in countries or regions with absolute water scarcity, and two-thirds of the world's population could be living under water stressed conditions.

Source: https://www.dosomething.org/us/facts/11-facts-about-water-developing-world

Take Action
March 22, 2017 is World Water Day, an annual global event focusing on the world water crisis. Launch an awareness program with your school, club, house of worship or science class. Or, just get a few friends together and get involved—plan for 2018!

- Support organizations like Water.org, WaterAid, The Thirst Project, Water for People, or UNICEF's Water Projects.
- Become an inventor and create or support scientific discovery and innovation.
- Remember that access to clean water affects all of us—Flint, Michigan, is a U.S. example of contaminated water.
- Fix small things like leaky faucets, plant a rain garden, build a rain barrel, take shorter showers, turn off the water while brushing your teeth. Minimize your water footprint. Little things DO make a difference.

Source: http://mashable.com/2016/03/22/water-crisis-how-to-help/#URijpMJ8_PqG

COUNTRY	INNOVATION
Costa Rica	• Aims to be carbon neutral (zero net greenhouse emissions) by 2021 • 96% of energy from renewable sources • Increased its forested area by 10% in the last decade Source: http://www.climatehotmap.org/global-warming-solutions/latin-america.html
Austria, Germany, Norway, Portugal and Spain	Increased the amount of renewable energy produced in their countries through the use of feed-in tariffs. Feed-in tariffs provide a specific, guaranteed price for electricity from renewable energy sources—typically over a 10-20-year period. Source: http://www.climatehotmap.org/global-warming-solutions/europe.html
Australia	Implemented a National Renewable Electricity Standard. Pursuing demonstration projects in carbon capture and storage from coal burning power plants. Source: http://www.climatehotmap.org/global-warming-solutions/australia-new-zealand.html
New Zealand	The New Zealand Emissions Trading Scheme (ETS) is one of only a few carbon trading systems in the world. The New Zealand approach requires emissions sources to buy credits to cover their emissions, and allows sources that reduce emissions to sell credits. Source: http://www.climatehotmap.org/global-warming-solutions/australia-new-zealand.html

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