

Climate change threatens Caribbean's water supply

September 6 2013, by Danica Coto



In this Sept. 3, 2013 photo, Jacquelin Calvaire, 17, bathes using water from a fountain that taps mountain water in Petion-Ville, Haiti. Experts are sounding a new alarm about the effects of climate change for parts of the Caribbean: the depletion of already strained drinking water throughout much of the region. (AP Photo/Dieu Nalio Chery)

Experts are sounding a new alarm about the effects of climate change for parts of the Caribbean—the depletion of already strained drinking water throughout much of the region.

Rising sea levels could contaminate supplies of fresh water and changing [climate patterns](#) could result in less rain to supply reservoirs in the coming decades, scientists and officials warned at a conference in St. Lucia this week.

"Inaction is not an option," said Lystra Fletcher-Paul, Caribbean land and water officer for the U.N. Food and Agriculture Organization. "The water resources will not be available."

Some of the possible solutions include limits on development, increased use of desalination plants and better management of existing [water supplies](#), but all face challenges in a region where many governments carry heavy debts and have few new sources of revenue.

Many Caribbean nations rely exclusively on underground water for their needs, a vulnerable source that would be hit hard by climate change effects, said Jason Johnson, vice president of the Caribbean Water and Wastewater Association, a Trinidad-based [nonprofit group](#).

"That's the greatest concern," he said. "Those [weather patterns](#) may change, and there may not necessarily be the means for those water supplies to be replenished at the pace that they have historically been replenished."

Parts of the Caribbean have been experiencing an unusually dry spell that emerged last year.

In August 2012, some islands reported extremely [dry weather](#), including Grenada and Anguilla. By July of this year, those conditions had spread to Trinidad, Antigua, St. Vincent and Barbados, the Caribbean Institute for Meteorology & Hydrology says.



In this Aug. 22, 2013 photo, a girl pushes down the lid on her her bucket filled with water she collected from the pipe that captures mountain water in Thomazeau, Haiti. Many Caribbean nations rely exclusively on underground water for their needs, a vulnerable source that would be hit hard by climate change effects, said Jason Johnson, vice president of the Caribbean Water and Wastewater Association, a Trinidad-based nonprofit group. (AP Photo/Dieu Nalio Chery)

"We're seeing changes in weather patterns," said Avril Alexander, Caribbean coordinator for the nonprofit Global Water Partnership. "... When you look at the projected impact of [climate change](#), a lot of the impact is going to be felt through water."

Intense rains have been reported in recent months in some Caribbean areas, but that doesn't mean an increase in fresh water supply, said Bernard Ettinoffe, president of the Caribbean Water and Sewerage Association Inc., a St. Lucia-based group that represents water utilities in

the region.

Heavy rains mean there's not enough time for water to soak into the ground as it quickly runs off, he said. In addition, the cost of water treatment increases, and many islands instead shut their systems to prevent contamination.

The island considered most at risk is Barbados, which ranks 21st out of 168 countries in terms of water demand exceeding available surface water supplies, according to a 2012 study by British risk analysis firm Maplecroft. Other Caribbean islands high on the list are Cuba and the Dominican Republic, which ranked 45 and 48, respectively. The study did not provide data on a smattering of eastern Caribbean islands that officials say are among the driest in the region.

"There are a number of indications that the total amount of rainfall in much of the Caribbean would be decreasing by the end of the century," said Cedric Van Meerbeeck, a climatologist with the Caribbean Institute for Meteorology & Hydrology.

Van Meerbeeck said water supplies will continue to decrease if individuals as well as agriculture and tourism, the region's key industries, do not monitor use.

"Climate is maybe not the biggest factor, but it's a drop in an already full bucket of water," he said. "It will have quite dramatic consequences if we keep using water the way we do right now."



In this Aug. 22, 2013 photo, vendors Jacline Bienheme, left, and Marie Jolerme wait for fishermen to return on the shores of Lake Azuei in Thomazeau, Haiti. Experts are sounding a new alarm about the effects of climate change for parts of the Caribbean: the depletion of already strained drinking water throughout much of the region. (AP Photo/Dieu Nalio Chery)

Jamaica, Trinidad and Barbados have ordered rationing this year, with Barbados reducing pressure and occasionally cutting off supply to some areas. The island also began to recycle water, with officials collecting treated wastewater to operate airport toilets.

Overuse of wells elsewhere has caused saltwater seepage and a deterioration of potable water underground, leading to the construction of hundreds of desalination plants in the Caribbean.

But the cost of desalination still remains unaffordable for many governments, said John Thompson, director of the Caribbean

Desalination Association board.

The biggest challenge overall is changing the mentality of water utility authorities who see their role as solely providing clean water, Johnson said.

"The new reality is that it's a national security issue if your [water](#) supplies are diminished," Johnson said. "It becomes a health and safety issue."

© 2013 The Associated Press. All rights reserved.

Citation: Climate change threatens Caribbean's water supply (2013, September 6) retrieved 24 April 2024 from <https://phys.org/news/2013-09-climate-threatens-caribbean.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.