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Global warming may put U.S. in hot water

By Seth Borenstein

AP Science Writer

WASHINGTON --

As the world warms, water - either too little or too much of it - is going to be the major problem for the United States, scientists and military experts said Monday. It will be a domestic problem, with states clashing over controls of rivers, and a national security problem as water shortages and floods worsen conflicts and terrorism elsewhere in the world, they said.

At home, especially in the Southwest, regions will need to find new sources of drinking water, the Great Lakes will shrink, fish and other species will be left high and dry, and coastal areas will on occasion be inundated because of sea-level rises and souped-up storms, U.S. scientists said.

The scientists released a 67-page chapter on North American climate effects, which is part of an international report on climate change impact.

Meanwhile, global-warming water problems will make poor, unstable parts of the world - the Middle East, Africa and South Asia - even more prone to wars, terrorism and the need for international intervention, a panel of retired military leaders said in a separate report.

"Water at large is the central (global warming) problem for the U.S.," Princeton University geosciences professor Michael Oppenheimer said after a press conference featuring eight American scientists who were lead authors of the Intergovernmental Panel on Climate Change's climate-effects report.

Roger Pulwarty, one of the federal government's top drought scientists, said states such as Arizona and Colorado, which already fight over the Colorado River basin water, will step up legal skirmishes. They may look to the Great Lakes, but water availability there will shrink, he said.

Reduced snow melt supplying water for the Sacramento Valley in California means that by 2020 there won't be enough water "to meet the needs of the community," Pulwarty said. That will step-up the competition for water, he said.

On the East Coast, rising sea levels will make storm surge "the No. 1 vulnerability for the metropolitan East Coast," said study lead author Cynthia Rosenzweig of NASA. "It's a very real threat and needs to be considered for all coastal development."

Rising sea level can harm Florida's biodiversity and be dangerous during hurricanes, the scientists added.

A few hours later, retired Gen. Charles F. "Chuck" Wald focused on the same global warming problem.

"One of the biggest likely areas of conflict is going to be over water," said Wald, former deputy commander of U.S. European Command. He pointed to the Middle East and Africa.

The military report's co-author, former Army Chief of Staff Gen. Gordon R. Sullivan, also pointed to sea-level rise floods as potentially destabilizing South Asia countries of Pakistan, India, Bangladesh, Indonesia and Vietnam.

Lack of water and food in places already the most volatile will make those regions even more unstable with global warming and "foster the conditions for internal conflicts, extremism and movement toward increased authoritarianism and radical ideologies," states the 63-page military report, issued by the CNA Corp., an Alexandria, Va.-based national security think tank.

Kristi Ebi, a Virginia epidemiologist on the scientific panel, said reduced water supplies globally will hinder human health. "We're seeing mass migration of people because of things like water resource constraint, and that's certainly a factor in conflict," she added.

Peter Gleick, president of the Pacific Institute, an Oakland, Calif., think tank, said the national security and domestic infighting over water comes as little surprise.

"Water is connected to everything we care about - energy, human health, food production and politics," said Gleick, who was not part of either panel. "And that fact alone means we better pay more attention to the security connections. Climate will effect all of those things. Water resources are especially vulnerable to climate change."

As water fights erupt between nations and regions and especially between cities and agricultural areas, Stanford scientist Terry Root said there will be one sure loser low on the priority list for water: other species.

"The fish will lose out and the birds and everything," she said.

Pollution will also worsen with global warming, the scientists said.

As places like the Great Lakes draw down on water, the pollution inside will get more concentrated and trapped toxins will come more to the surface, said Stanford scientist Stephen Schneider.

And even the air, especially in the Northeast, will become more deadly. More heat means more smog cooked and about a 4 to 5 percent increase in smog-related deaths, Ebi said. That's thousands of people, she said.

The scientists and military leaders held out hope that dramatic cuts in fossil fuel emissions could prevent much of the harm they are predicting. But they said the U.S. government - and the rest of the world - has to act now.

- [The Intergovernmental Panel on Climate Change chapter on global warming impacts in North America](#)
- <http://securityandclimate.cna.org/report/>