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Get used to high food costs, water shortages

Climate report offers a dire look at next 50 years in U.S.

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By ROBERT MCCLURE AND TOM PAULSON
P-I REPORTERS

Shocked by rising food prices? Get used to it -- and be ready for water shortages, too, says a sweeping new scientific report rounding up likely effects of climate change on the United States' land, water and farms over the next half-century.

Some effects already can be felt, says the report released Tuesday, which synthesizes results of more than 1,000 individual studies.

And it's not just humans' food that's at risk, said witnesses at a congressional field hearing in Seattle on Tuesday. An intense and sudden acidification of the Pacific resulting from climate change presages a possible breakdown in the marine food web, experts said at the hearing, headed by Sen. Maria Cantwell, D-Wash.

"This is not a problem of tomorrow but a problem for today," said Rep. Jay Inslee, D-Wash., noting that nearly 10 percent of protein in the human diet is from the oceans. "It just scares the heck out of me."

The U.S. Department of Agriculture report cataloged effects thought by scientists to be likely over the next 25 to 50 years on agriculture, land and water.

Even if greenhouse gas production stopped now, climate change already has been set in motion, said the review by 38 scientists, mostly from the federal government and universities. The panel included some of the nation's leading climate researchers.

"We have already observed the consequences," said David Schimel of the National Ecological Observatory Network, one of three lead authors. "We have a very clearly observed trend toward earlier snowmelt and more winter rain, both of which greatly complicate water management."

Other early effects, the report said, include the country growing warmer and wetter over the past century. While the South and East are receiving more rain and snow, the West and Southwest -- with the greatest water shortages -- are getting less. More and hotter heat waves are occurring.

Because of climate disruption of agriculture, consumers can count on higher food prices, researchers said in a news conference. An example of the kind of crop disruption to expect: This spring's unusually wet weather in Eastern Washington discouraged bees from flying. That led to fewer cherry trees being fertilized through pollination. Result: A smaller cherry harvest -- and higher prices.

Although not all the effects of climate change will be bad, many seeming pluses actually aren't, the research team said. For example, more carbon dioxide makes plants grow faster. But, "as they grow quicker, they are generally going to be smaller plants," said Jerry Hatfield, of the Agriculture Department's Agricultural Research Service.

Other results of the study include:

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Whereas warmer winter temperatures will spare some livestock from freezing to death, that is likely to be more than offset by deaths in heat waves.

- Increased fires and infestations of insects no longer killed off by cold winters could change the face of Western forests.

- The West's system of capturing runoff from snowmelt is likely to be thrown out of whack by increased winter rains and higher spring temperatures melting snow faster.

Grain crops may benefit from warmer temperatures, growing more quickly -- but could be endangered by more heat waves or other climate disruptions. Horticultural crops such as tomatoes, onions and fruit are more likely to be affected than grains.

Tuesday's congressional hearing took place beneath a massive aquatic display at the Seattle Aquarium. Onlookers included coho salmon, rockfish and other marine creatures.

It focused mostly on scientific studies showing rapid acidification of the Pacific Ocean because of chemical reaction with atmospheric carbon dioxide.

"These studies have confirmed that the oceans are absorbing approximately one-third of the carbon emissions," said Chris Sabine, an oceanographer at the National Oceanic and Atmospheric Administration's Pacific Marine Environmental Laboratory in Seattle. He was co-leader of a study released last week showing the waters off the West Coast are becoming increasingly more acidic -- and much closer to shore, much faster, than anticipated.

Cantwell said a warmer, more acidic Pacific Ocean could devastate important fisheries, which, in addition to causing grave economic harm, likely would ripple through the ecosystem, disrupting marine life and further endangering fragile populations such as the orcas that frequent Puget Sound.

"Let's acknowledge that we are heading into uncharted territory," said Jeff Koenings, a scientist who leads the state Department of Fish and Wildlife. Clearly, he said, salmon runs are an indication of a struggling ecosystem and "something is going on," but more research is needed to pinpoint the precise effect.

The new findings on Pacific Ocean acidification demand quick action, Inslee said.

"From an acidification standpoint, the ocean is on fire," he said. "We need to respond as if it is on fire."

One of the scientists, UW marine scientist Terrie Klinger, tried to emphasize the uncertainty and said it is possible that some marine species may actually benefit from higher acidity. Small comfort, Inslee said.

"I can tell you my constituents do not relish a sportfishing season for jellyfish instead of salmon," he said.

P-I reporter Robert McClure can be reached at 206-448-8092 or robertmcclure@seattlepi.com. Read his blog on the environment at datelineearth.com.

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