

Worst drought in decades hits Chile's capital and outskirts

Officials in Chile say the capital city and its outskirts are suffering from the worst drought in many years.

The government has declared an agricultural emergency in many areas to try to fast-track a series of relief measures for farmers, including provision of drinking water and medicine for animals, phys.org wrote.



phys.org

Santiago metropolitan region, Coquimbo, Valparaiso and O'Higgins are among the worst-hit areas.

Agriculture Minister Antonio Walker said this week that 2019 is one of the driest years Chile has faced in six decades.

Officials are increasingly concerned by the effects of climate change after a long-drought. The world's leading copper-producing country uses large quantities of water for the industry, which is the backbone of the economy.

Chile will host a global conference on climate change in December.

Archeologists uncovering ancient fort's secrets before it falls into sea

Archeologists in the UK are working to uncover the secrets of an ancient coastal hillfort before it falls into the sea.

Perched on a slowly collapsing cliff edge, the mysterious fort at Dinas Dinlle in Wales is believed to date back to the Iron Age, which began 800 BCE in Britain. The fort's western rampart is already falling victim to coastal erosion and experts are working to record as many details of the site as they can, foxnews.com wrote.



foxnews.com

Toby Driver, PhD, senior investigator for the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) told Fox News about the fascinating structure.

"An Iron Age roundhouse around 13 meters [42.7 feet] diameter — one of the largest stone roundhouses we have seen — has been unearthed in one of the trenches closest to the eroding cliff edge," he explained, via an email.

"This is an unexpected prehistoric building of fantastic build quality. With coastal erosion increasing it may only have another 50 years or so before it reaches the cliff edge."

The roundhouse is believed to have become covered in coastal sand during a sandstorm in 1330 CE, the BBC reported. Archeologists and geographers from the Royal Commission and Wales' Aberystwyth University have been investigating the site, even using climbing gear to carefully study the cliff face.

Driver told Fox News that excavations are funded by the Climate, Heritage and Environments of Reefs, Islands and Headlands (CHERISH) Project, which is investigating climate change and coastal heritage in Ireland and Wales.

"Investigations will continue throughout the project to monitor how much is being lost to the sea — and to the increasing effects of climate change on the monument — using techniques such as excavation, laser scanning and UAV [drone] surveying," explained the CHERISH Project, in a statement provided to Fox News.

Owned by the UK's National Trust, Dinas Dinlle is designated a monument by Cadw, the Welsh government's historic environment service.

Wales continues to reveal new aspects of its rich history. A student taking part in his first-ever archeological dig, for example, recently discovered an incredible ax dating back to the 'New Stone Age' at Talsarnau in Wales.

Experts have also been unlocking new details of a Roman villa at Abermagwr in west Wales.

In 2017 archeologists discovered a Bronze Age cemetery at a ritual site on the Welsh island of Anglesey.

A strange prehistoric forest was recently revealed on a Welsh beach in the aftermath of Storm Hannah.

Brazilian president sends army to put out huge blaze as G7 leaders hold emergency talks

Brazil's President Jair Bolsonaro bowed to international pressure and sent the military to battle huge blazes sweeping across the Amazon, after G7 leaders meeting in Biarritz threatened to tear up a trade deal with South America.

Amid a global chorus of concern and condemnation, Bolsonaro pledged to mobilize the army to help combat the fires, while his administration launched a diplomatic charm offensive to try to build bridges overseas, independent.co.uk wrote.

Images of fires raging in the Amazon broadcast around the globe sparked protests outside Brazilian embassies from Mexico City and Lima to London and Paris. In the Cypriot capital Nicosia, a sign tied to the railings of Brazil's diplomatic mission read: "The Amazon belongs to Earth not to the Brazilian president."

Both France and Ireland threatened to oppose a European Union (EU) trade deal struck in June with a regional South American bloc.

Bolsonaro initially accused non-governmental organizations of setting the forest on fire without providing any evidence. He then attributed the scale of the fires to dryer-than-average weather.

Earlier this week leaked documents showed the Brazilian president is looking to sabotage conservation efforts and wants to build bridges, motorway and hydroelectric plants in the jungle.

Now the Brazilian president has made a diplomatic U-turn and has announced that the country's armed forces will assist in putting out fires for a month, saying "the protection of the forest is our duty".

The army will be deployed to border areas, indigenous territories and other affected regions in the Amazon, according to a presidential decree authorizing



REUTERS

use of the army.

"We are aware of that and will act to combat deforestation and criminal activities that put people at risk in the Amazon," he said. "We are a government of zero tolerance for crime, and in the environmental field it will not be different."

Bolsonaro has previously described rainforest protections as an obstacle to Brazil's economic development, sparing with critics who note that the Amazon produces vast amounts of oxygen and is considered crucial for efforts to contain climate change.

As the president spoke, thousands of Brazilians demonstrated in Rio de Janeiro, Sao Paulo and the capital of

Brasilia demanding the government announce concrete actions to curb the fires.

People also banged pots from their homes, a traditional mode of protest in South America.

Neighboring Bolivia and Paraguay have also struggled to contain fires that swept through woods and fields, in many cases set to clear land for farming.

About 2,900 square miles of land have been affected in Bolivia, Defense Minister Javier Zavaleta said.

A B747-400 SuperTanker arrived in Bolivia and began flying over devastated areas to help put out the fires and protect forests. The US-based

aircraft can carry nearly 76,000 liters (20,000 gallons) of retardant, a substance used to stop fires.

Some 140 square miles have burned in northern Paraguay, near the borders with Brazil and Bolivia, said Joaquin Roa, a Paraguayan state emergency official. He said the situation had stabilized.

Close to 20 percent of the Amazon has already been deforested, said Thomas Lovejoy, a George Mason University environmental scientist.

Argentina, which is struggling with rising poverty and austerity measures, has offered to send emergency workers to Brazil and Bolivia to help battle the fires. Chile also offered aid.

Hybrid helmeted honeyeaters introduced into wild to stop species dying out

Researchers have introduced three dozen hybrid helmeted honeyeaters into the wild in Australia in an attempt to prevent the critically endangered bird from dying out because of inbreeding.

On Friday, the juvenile birds were released into the Yellingbo Nature Conservation Reserve, located 45 km east of Melbourne which holds the only wild population of critically endangered helmeted honeyeaters, in an unusual attempt at genetic species rescue, theguardian.com wrote.

The researchers say that without interbreeding, fertility rates within the 230-strong wild population could drop so low that the species would not survive.

The hybrids are the product of judicious crossing of the yellow-tufted honeyeater with the helmeted honeyeater, a closely related sub-species, at Healesville Sanctuary, outside Melbourne.

The sub-species diverged about 50,000 years ago and interbred in the wild until the helmeted honeyeater population dropped so low that it became isolated from its nearest relatives.

It is one of 20 key species targeted under a \$30 million



theguardian.com

program by Zoos Victoria to prevent species extinction.

A study of 33 years of genetic and breeding data from the wild helmeted honeyeater population, published in the journal Current Biology this month, said the predicted lifetime reproductive success for a bird that was the product of several generations of inbreeding was up to 90 percent lower than that of the least inbred individuals.

Failure to address inbreeding, the study said, would "slow or prevent population recovery, even under intensive management interventions."

The manager of conservation and research at Healesville, Kim Miller, said the hybrid breeding program mimicked historic breeding patterns in the wild.

"We know that as recently as 30 years ago there was regular genetic transfer between the two subspecies," Miller

said. "That has been essentially disrupted by habitat fragmentation. Our objective is really to replicate what would happen under normal circumstances for these two subspecies."

Healesville bred two generations of the hybrid birds to ensure they were "robust, healthy, and capable of breeding themselves".

Miller said the program was intended to restore fer-

tility rates for wild honeyeaters and would be monitored to ensure the integrity of the unique sub-species was not compromised.

"We have a really good plan in place for how much genetic diversity we are looking to introduce," she said. "That's enough to restore the level of genetic transfer between the two species back to its historic levels."

The birds appear identical to helmeted honeyeaters. The president of Friends of the Helmeted Honeyeater, Alan Clayton, said he could not tell the hybrids apart.

"The little critter doesn't stay still long enough in the wild for you to get a good look anyway," he said.

The organization was founded in 1989 and has been the main source of in-field monitoring of the birds, as well as conducting habitat restoration. Volunteers have planted more than 3 million trees and shrubs, focusing on the honeyeater's preferred habitat of *Eucalyptus ovata* and *Eucalyptus camphora*.

"If we do nothing but continue our efforts on this, there is an 87 percent risk of it being extinct from the consequence of inbreeding in 50 years anyway," Clayton said.