**A Lake in Bolivia Evaporates, and With It a Way of Life**

UNTAVI, Bolivia — Overturned fishing skiffs lie abandoned on the shores of what was [Bolivia](http://topics.nytimes.com/top/news/international/countriesandterritories/bolivia/index.html?inline=nyt-geo)’s second-largest lake. Beetles dine on bird carcasses and gulls fight for scraps under a glaring sun in what marshes remain.

Lake Poopó (pronounced po-oh-PO) was officially declared evaporated last month. Hundreds, if not thousands, of people have lost their livelihoods and have left the area.

High on Bolivia’s semiarid Andean plains at more than 12,000 feet and subject to climatic whims, the shallow saline lake has dried up before only to rebound to a size twice the area of Los Angeles.

But recovery may no longer be possible, scientists say.

“This is a picture of the future of [climate change](http://topics.nytimes.com/top/news/science/topics/globalwarming/index.html?inline=nyt-classifier),” said Dirk Hoffman, a German glaciologist who studies how rising temperatures from the burning of fossil fuels has accelerated glacial melting in Bolivia.

As Andean glaciers disappear, so do the sources of Poopó’s water. But other factors are in play in the demise of Bolivia’s second-largest body of water after Lake Titicaca. Drought caused by the recurrent El Niño meteorological phenomenon is considered the main driver. Officials say another factor is water diverted from Poopó’s tributaries, mostly for mining but also for agriculture. More than 100 families have sold their sheep, llamas and alpaca, set aside their fishing nets and left the former lakeside village of Untavi over the past three years, draining it of well over half of its population. Only the elderly remain.

“There’s no future here,” said Juvenal Gutiérrez, 29, who moved to a nearby town.

Record-keeping on the lake goes back only a century, and there is no good tally of the people displaced by its disappearance. At least 3,250 people have received humanitarian aid, the governor’s office says.

Lake Poopó is now down to 2 percent of its former water level, the region’s governor, Victor Hugo Vásquez calculates. Its maximum depth once reached 16 feet. Biologists say 75 species of birds are gone from the lake.

While Poopó has suffered droughts fueled by El Niño for millenniums, its fragile ecosystem has experienced unprecedented stress in the past three decades. Temperatures have risen by about 1 degree Celsius, 1.8 degrees Fahrenheit, and mining has pinched the flow of tributaries, increasing sediment.

Mark B. Bush, a biologist at the Florida Institute of Technology, said the long-term trend of warming and drying threatened the entire Andean highlands.

In 2010, Mr. Bush was one of the authors of a study for the journal Global Change Biology that said that Bolivia’s capital, La Paz, could face catastrophic drought this century. It predicted that “inhospitable arid climates” would lessen available food and water for the more than three million inhabitants.

A study by the German consortium Gitec-Cobodes determined that Poopó received 161 billion fewer liters of water in 2013 than is required to maintain equilibrium.

“Irreversible changes in ecosystems could occur, causing massive emigration and greater conflicts,” said the study, which was commissioned by Bolivia’s government.

The leader of a local citizens’ group that tried to save Poopó, Angel Flores, said the authorities ignored warnings.

“Something could have been done to prevent the disaster,” Mr. Flores said. “Mining companies have been diverting water since 1982.”

President Evo Morales has sought to deflect criticism that he bears responsibility, suggesting that Poopó could come back.

“My father told me about crossing the lake on a bicycle once when it dried up,” Mr. Morales said last month.

Environmentalists and local activists say the government mismanaged fragile water resources and ignored rampant pollution from mining. More than 100 mines are upstream, and Huanuni, Bolivia’s biggest state-owned tin mine, was among those dumping untreated tailings into Poopó’s tributaries.

After thousands of fish died in late 2014, the Universidad Técnica in the nearby state capital, Oruro, found that Poopó had unsafe levels of heavy metals, including cadmium and lead.

The president of Bolivia’s National Chamber of Mining, Saturnino Ramos, said any blame by the industry was “insignificant compared to climate change.” He said most of the sediment shallowing Poopó’s tributaries was natural, not from mining.

The government has asked the European Union for $140 million for water treatment plants for the Poopó watershed and to dredge tributaries led by the Desaguadero.

Critics say it may be too late.

“I don’t think we’ll be seeing the azure mirror of Poopó again,” said Milton Pérez, a Universidad Técnica researcher. “I think we’ve lost it.”

1) Identify and describe one environmental, one economic and one social impact of the disappearance of Lake Poopó.