Study finds that the Dead Sea almost dried up over 100,000 years ago

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Salt buildup on the shores of the Dead Sea. Image: Ian and Wendy Sewell/Wikipedia

Rapidly dropping water levels of the Dead Sea, the lowest point on the earth's surface heralded for its medicinal properties, has been a source of ecological concern for years. Now a drilling project led by researchers from Tel Aviv University and Hebrew University reveals that water levels have risen and fallen by hundreds of meters over the last 200,000 years.

Directed by Prof. Zvi Ben-Avraham of TAU's Minerva Dead Sea Research Center and Prof. Mordechai Stein of the Geological Survey of Israel, researchers drilled 460 meters beneath the sea floor and extracted sediments spanning 200,000 years. The material recovered revealed the region's past climatic conditions and may allow researchers to forecast

future changes.

Layers of salt indicated several periods of dryness and very little rainfall, causing water to recede and salt to gather at the center of the lake. During the last interglacial period, approximately 120,000 years ago, the sea came close to drying up entirely, the researchers found, with another period of extreme dryness taking place about 13,000 years ago.

Today, the Dead Sea lies 426 meters below sea level and is receding rapidly. Despite this historical precedent, there is still cause for concern, says Prof. Ben-Avraham. In the past the change was climate-driven, the result of natural conditions; today, the lake is threatened by human activity.

"What we see happening in the Middle East is something that mimics a severe dry period, but this is not climate-enforced, this is a man-made phenomenon," he warns, caused by increasing amounts of water being taken from rivers for irrigation before it reaches the Dead Sea. Ultimately, this prevents the refilling of the sea by the waters of the Jordan River.

Provided by Tel Aviv University