The Dead Sea is one of the saltiest bodies of water in the world, an internationally famous tourist destination, a vital resource for the Middle East and presently at the center of a major politico-environmental crisis. The sea lays in the Jordan Rift Valley, with its shores at 427 meters below sea level – the lowest elevation in the world – and a depth of 306 meters – making it the deepest salt lake in the world. The hypersalinity of the sea makes life virtually impossible, appropriately dubbing the sea as ‘dead.’ People come from all over the world to swim in the Dead Sea or, rather, float, given the great density of the seawater – our class was no exception. However, this famous sea has been enduring a major desiccation problem.

The issue of Dead Sea desiccation refers to the rapid shrinking of this ancient waters’ surface. The desiccation grew aggressively beginning in the 1970’s, primarily due to the diversion of its source of inflowing water from the Jordan River. Over the period from 1970 to 2006, the surface level of the Dead Sea fell from 395 meters below sea level to 418 meters below sea level – over 20 meters total, or 1 meter per year.

Rising populations, expanding agriculture sectors, new industrial activities and new dams are bearing a significant cost on the margin of the desiccation issue. These dams divert water from the Jordan River for agricultural production and population consumption. Major industrial activities, such as the efforts of the Dead Sea Works company to process minerals like potash (potassium) from man made evaporation ponds in the southern part of the sea, drive the Dead Sea desiccation a great deal.

The dramatic change in water level can have serious impacts on the local land as well as the water itself.

Big news outlets report on the appearance of large sinkholes along the western shore as a major land impact of the Dead Sea desiccation. This sinkhole phenomenon is a threat to the integrity of the land, commercial establishments such as hotels and restaurants and even human lives. With the desiccation of the sea comes the recession of groundwater levels, which forces freshwater to invade underground layers, displacing the brines, dissolving layers of salt and creating new cavities until the ground surface collapses and creates massive sinkholes.

The popular project to tackle the desiccation of the Dead Sea is known as the Red Sea-Dead Sea canal, among many other names. This agreement – between Israel, Jordan and the Palestinian Authority – stipulates that approximately 100-200 million metric cubes of water will transport north from the Red Sea to the Dead Sea. This agreement aims to establish a desalination facility in Aqaba to purify about half of the water for Jordanians and Palestinians and for Israel’s use in the Arava and Eilat.

The desiccation of the Dead Sea is not new. About 100,000 years ago, the Dead Sea almost completely dried up. Geologists from the Lamont Doherty Earth Observatory at Columbia University drilled a core of the Dead Sea to analyze about 250,000 years of sediment within the sea’s history. The geologists argue the 45-meter salt layer within the core represents the evaporation of the lake into a beach during the planet’s last warm period. These findings have the potential to worsen regional water conflicts by raising the stakes of these resources.

Dead Sea desiccation poses major issues for regional water use and supply, environmental integrity, commercial interests and international relations.