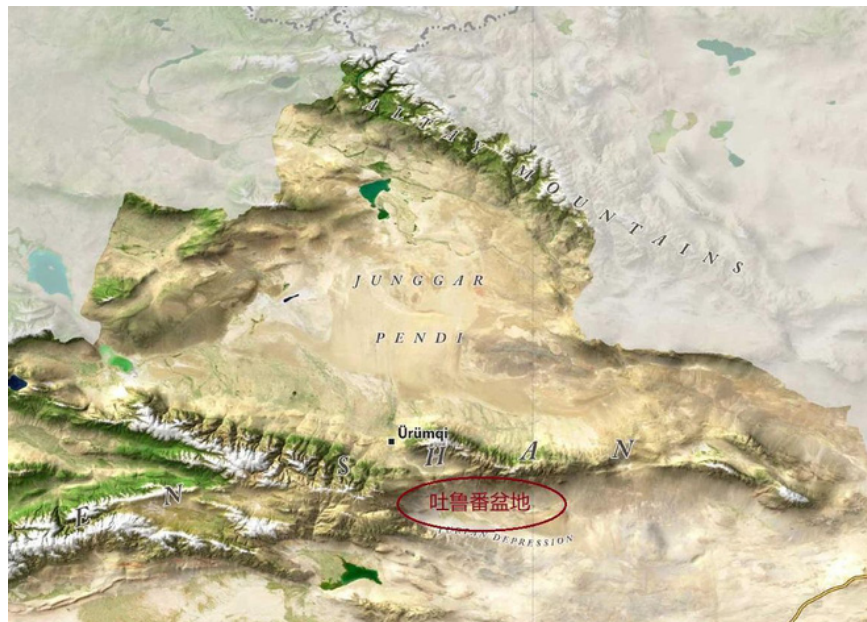


# Why is it lower than the sea level but there is no big lake in Turpan basin?

The Turpan basin has the lowest elevation in China. This basin is 154 meters high below sea level but in reality, there are no large lakes here.

Our Earth is covered with a large amount of water, most of which are liquid like lakes and oceans, but there are also some solid-covered areas like water in glaciers and frozen soil, some exist in the form of gas, mainly the amount of water in the atmosphere.

Water is the source of life and life on our planet is indispensable in the presence of water, our activities of production and living cannot be separated from it, so humans have a habit accustomed to living in areas with ancient water sources. Over time, the amount of water used by humans has also increased.



Flows on the surface of the Earth are the main water resources of humans, of which rivers and lakes are the most important water supply, but for the lake, they cannot all be used as resources. raw water for human life.

According to the nature of the water in the lake, we can divide it into freshwater lakes and saltwater lakes.

For example, Poyang Lake, Dongting Lake and Taihu Lake are all freshwater lakes, and many lakes on the Thai Hai - Tibet Plateau, such as Qinghai Lake, Namco and Selinco, etc. These are all saltwater lakes and Cannot be used as domestic water source.

In fact, the number of lakes in northwest China is relatively small. There is a basin in southeastern Xinjiang called "Turpan Basin". This area is not only famous for grapes, but it also possesses a very special height. This basin is 154 meters below sea level (lower than 154 meters above sea level). But why are there no large lakes in such basins?

To answer this question, first, review the definition of a lake. Lakes are relatively large, deep pools of inland water. The lake usually does not have a certain area. There are very large lakes, an area of ??tens of thousands of square kilometers, such as Lake Victoria in Africa, Aran Lake in Asia, but there are also small lakes only a few hundred m<sup>2</sup> wide.



The topography of the Turpan basin is the topography of the basin, which means that the lowlands and valleys will be centered, surrounded by mountains or high lands. In fact, this is an inter-mountain basin, belonging to a rift basin formed by a fault slope. The total area of ??the Turpan basin is about 50,000 km<sup>2</sup>, of which the area below sea level is about 4,050 km<sup>2</sup> - mainly located in the western part of the Turpan basin. In other words, the Turpan basin has a very "superior" basin structure. If the Turpan basin can store water, then it is certain that the lake in this basin will have a huge area, about 4,000 km<sup>2</sup> and it will become China's second largest lake after Qinghai Lake.

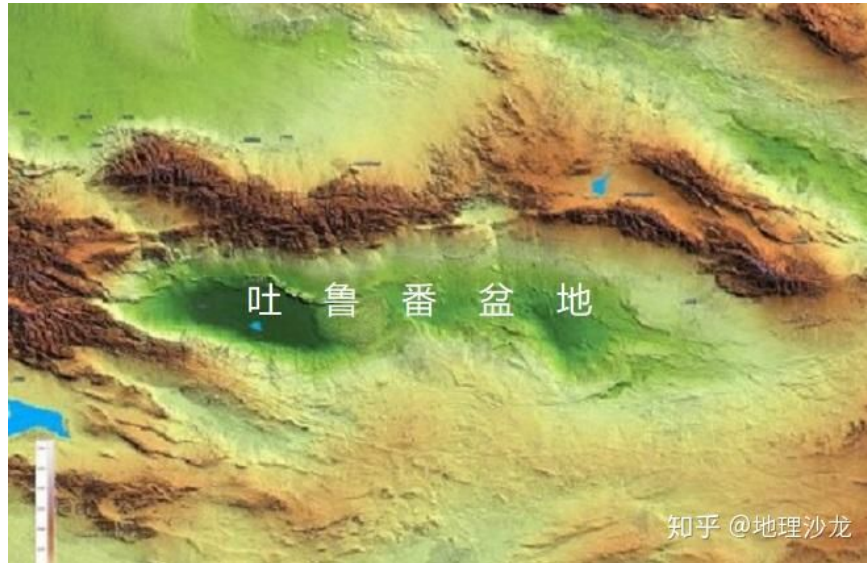


Qinghai Lake or Koko Nor Lake is the largest lake in China, and is the second largest saltwater lake in the world. Hu Qinghai is also the widest lake with no drainage system in China. The ancient Chinese ranked Qinghai Lake as the West Sea in Sihai along with Lake Baikal, East China Sea and East Sea.

However, this is only theoretical, because the Turpan basin possesses only ideal terrain but lacks another condition to form a large lake, which is the water body.

We know that water will flow from high terrain to low terrain and the Turpan basin is very low altitude. If there is sufficient water in the area, the water will naturally converge into the basin and form a lake.

But the fact is that finding water in the Turpan basin is a "luxury". Not only the Turpan basin, but the entire Xinjiang region is located deep inland and away from the sea, so it is difficult for water vapor from the ocean to reach this area so the climate is formed. It is a temperate continental climate with cold winters, hot summers and extremely low annual rainfall.



Turpan basin is more closed than the general level of Xinjiang area due to its basin topography and less annual rainfall. Annual precipitation is only about 16 mm, while areas with annual rainfall below 200 mm are considered extremely arid. The water in the Turpan basin is mainly from the melting water of glaciers on the surrounding high mountains but is also very limited.

Moreover, the Turpan basin has a very strong evaporation capacity, with an annual evaporation of 3000 mm. Due to the low rainfall and strong evaporation in the Turpan basin and lack of water bodies, these are the reasons why a huge lake cannot be formed. However, in the lowest part of the Turpan basin, a lake is formed due to the convergence of water sources. The area is about 150 square kilometers, but now it's almost dry all year round.

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