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**Global Change Data Encyclopedia**

# Paiku Co

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**Dataset Available Statement:**

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Paiku Co, also known as Pogu Lake, Lamuzuhai, Lacoxinco[1], is the largest lake in Shigatse, Tibet autonomous region, China. The Paiku Co is located at the junction of Jilong and Nylam in Shigatse. It is inland brackish water lake and the lake type is tectonic lake[2]. The elevation of the lake is 4,585 m. The geo-location of the Paiku Co is between 28°46′33″N and 29°01′26″N, 85°29′46″E and 85°40′15″E[3] (Figure 1–2).

Paiku Co is located in the western of the rift basin on the northern foothills of the Himalayas, and surrounded by mountains on the north, east and west which have steep shores. The south is a flood-lacustrine plain dotted with arc hills and the terrain is more open[4]. It is like a gourd with a narrow center and wide ends. There are dozens of visible ancient lake shorelines in its northeast corner, and the highest lake shoreline is about 80 m above the level of the modern lake. There are tens of visible paleo-shorelines around Paiku Co with the highest shoreline about 80 m above the modern lake level, indicating that the lake has been shrinking since early Holocene[5]. It is about 30 km north of the Yarlung Zangbo River and about 60 km south is the Xixiabangma Peak at 8,012 m asl. Looking south from the shore of Paiku Co, there is an extremely spectacular cloud waterfall phenomenon at the northern foot of Xixiabangma Peak.

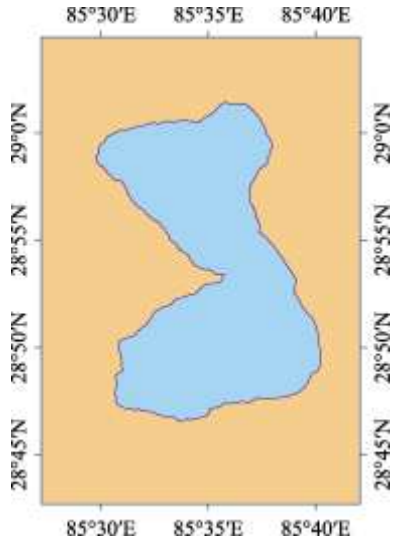


**Figure 1** Map of Paiku Co (.shp format)

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In 2015, the water area of the Paiku Co was 270.74 km²; and the shoreline was 90.78 km. It is a plateau temperate monsoon semi-arid climate. The sunshine is sufficient with annual sunshine hours of 2,723.5 h. The dry and wet seasons are distinct. Summer precipitation is concentrated with an annual precipitation of 380.6 mm. The annual temperature difference is large with an average annual temperature of 3.8 ℃[6].

**Figure 2** Map of Paiku Co (.kmz format)

The vegetation around Paiku Co is dominated by alpine grasslands. Among them, Alpine Stipa purpurea is the most widely distributed, and there are various grassland types composed mainly of Artemisia, orinus thoroldii, and pennisetum flaccidum. The sediments around the lake basin are fine, the soil moisture conditions are good, and the Achnatherum longearistata grassland is developed in some areas[7].

The water in Paiku Co Lake mainly depends on precipitation and glacial-snowmelt runoff. There are 13 rivers of different sizes entering the lake around the lake and glacial-snowmelt water is the main supply water of the river into the lake. Barixiongqu is the largest runoff into the lake on the southeast shore, followed by Zhaqu (Daqu) and Laqu on the south shore. The other rivers entering the lake are smaller in scale, mostly seasonal. There are still more than 10 springs exposed in the basin, which are supplied to the lake. The lake has pH of 9.5 and salinity of about 1.921 g·L$^{-1}$, which is a carbonate lake. There are naked carps in the lake, which are small and medium-sized economic fish. There are county-level highways on the south, north and west sides of the lake, which are connected to 219 National Road and 318 National Road respectively[2]. There are wild horses, kiangs, Tibetan antelopes, Tibetan cranes, ruddy shelducks, grey teals and other animal activities on the lake shore, and migratory birds inhabit.

The dataset was developed based on Google Earth satellite images (2015) and related maps. The dataset is archived in .shp[8] and .kmz formats, and consists of 14 data files with a data size of 223 KB (compressed into 2 files with 98.7 KB).

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## Data Computing Environment

[8] ESRI's computing platform in the ArcGIS of Qinghai Normal University.

## URL for Data Downloading

http://geodoi.ac.cn/WebEn/doi.aspx?Id=1490.

Or search through: http://www.geodoi.ac.cn.