

Global Change Data Encyclopedia

Dongcaoalong Lake, Qinghai-Tibet Plateau, China

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Keywords: Dongcaoalong Lake; Qinghai-Tibet Plateau; Qinghai province; fresh water lake; data encyclopedia

Dongcaoalong Lake is located on the Qinghai-Tibet Plateau, and belongs to Madoi county, Guoluo Tibetan autonomous prefecture, Qinghai province, China. It is separated from Ngoring Lake 81 km at its northwest, and from Donghu Lake 77 km at its north. Dongcaoalong Lake lies in the northern bank of the Yellow River, and it is an exorheic lake formed by the swinging of Yellow River bed. It is connected with the Yellow River, so it belongs to an exorheic plateau lake. Its geo-location of the lake is $98^{\circ}42'40''\text{N}$ – $98^{\circ}45'56''\text{N}$, $34^{\circ}28'55''\text{E}$ – $34^{\circ}31'2''\text{E}$ ^[1] (Figure 1, Figure 2).

There are mountains on the east, west, and north sides of the Dongcaoalong Lake, while the terrain is flat in the south side, where Yellow River develops braided drainage. Due to the constant change of the drainage line of Yellow River, floodplains and wetlands interlaced with lakes and marshes are formed by the Yellow River^[2]. Dongcaoalong Lake is 5 km wide in east-west direction, and 3.7 km long in north-south direction. The area of the Lake (2015) is



Figure 1 Data map of Dongcaoalong Lake (.kmz format)

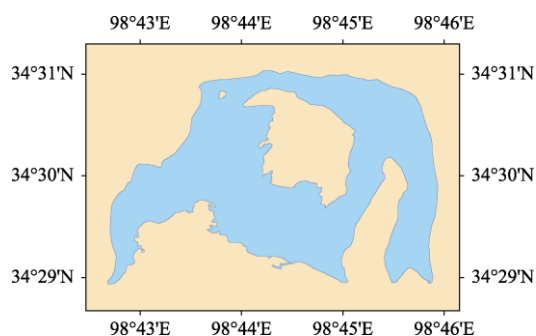


Figure 2 Data map of Dongcaoalong Lake (.shp format)

Received: 16-07-2018; **Accepted:** 05-12-2018; **Published:** 24-12-2018

Foundation: Chinese Academy of Sciences (XDA20040201)

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Data Citation: [1] Gou, Z. J., Liu, F. G. Dongcaoalong Lake, Qinghai-Tibet Plateau, China [J]. *Journal of Global Change Data & Discovery*, 2018, 2(4): 452-453. DOI: 10.3974/geodp.2018.04.14.

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10.17 km², and the shoreline is 33.37 km. There are two islands in the lake: the bigger one has an area of 2.04 km² and the shoreline of 8.01 km; while the smaller one has an area of 0.01 km² and the shoreline of 0.4 km^[1]. There are migratory birds gathering on the islands.

The Dongcaolong Lake is in a typical alpine semi-arid climate zone, with a long cold season and big temperature difference. The annual average temperature is −3.8 °C, the annual precipitation is about 321 mm, and the annual evaporation is about 1,367 mm (Table 1). Normally, the Dongcaolong Lake could freeze at December and melt again in May of the following year.

The Dongcaolong Lake belongs to the fresh water lake, and the water mainly depends on the precipitation and the Yellow River in the rainfall season, with no surface runoff flowing directly into the lake^[5]. Dongcaolong Lake and the lakeside belong to the *Kobresia littledalei* marsh wetland, with *Kobresia littledalei* dominated in the phytocoenosium in the surroundings of the water body. Dongcaolong Lake is an important breeding place for birds such as anatidaes and gulls, and the transition station for migratory birds, such as red-crowned crane, teal, sea gull, and cormorant^[6].

Table 1 Average monthly temperature and precipitation statistics of Madoi county^[3–4]

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual average
Temperature (°C)	−16.8	−13.4	−8.2	−3.0	1.7	5.2	7.5	7.2	3.3	−2.9	−11.0	−15.7	−3.8
Precipitation (mm)	3.6	4.8	5.7	11.0	31.2	59.2	72.7	59.6	46.8	18.6	2.9	2.5	321.6
Evaporation (mm)	44.7	59.9	108.3	144.7	168.5	172.4	182.2	169.6	131.4	87.2	57.9	42.8	1,367.6

The dataset was developed based on Google Earth images and related maps. It is consisted of 22 data files, and archived in both .shp^[7] and .kmz formats with the data size of 530 KB (Compressed to 193 KB in two files).

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Data Computing Environment

[7] ESRI. ArcGIS campus license of Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences.

URL for Data Downloading

<http://www.geodoi.ac.cn/WebEn/doi.aspx?Id=1103>.
Or search through: <http://www.geodoi.ac.cn>.