

The Major Mountain Ranges and Plateaux of Our Country

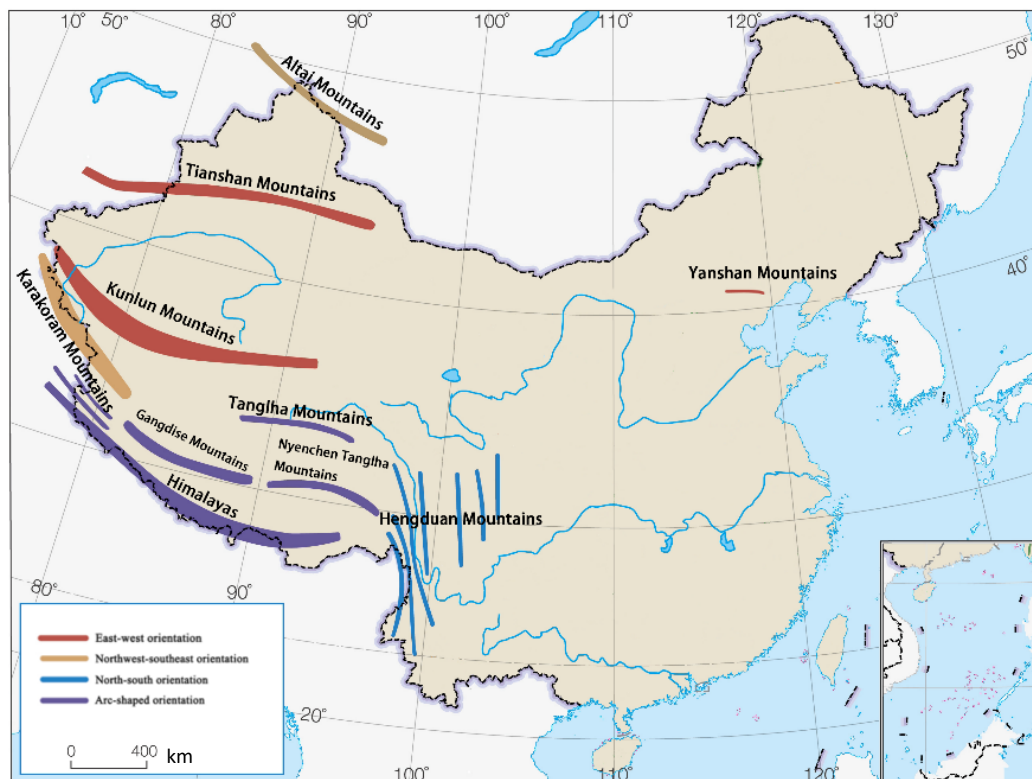
I. Overview

Our country is a land of remarkable geographical diversity, home to some of the world's most renowned mountain ranges and plateaux. Our country's major mountain ranges, such as the majestic Himalayas and the expansive Kunlun Mountains, dominate the landscape, shaping its climate, rivers, and ecosystems. Equally significant are the four distinctive plateaux, including the Qinghai-Tibet Plateau, often called the "Roof of the World." Together, these natural wonders reflect the vastness and uniqueness of our country's topography.

II. The major mountain ranges of our country

Our country is home to several significant mountain ranges, including the Himalayas, Gangdise Mountains, Tanglha Mountains, Nyenchen Tanglha Mountains, Hengduan Mountains, Karakoram Mountains, Kunlun Mountains, Tianshan Mountains, Altai Mountains, and Yanshan Mountains. Only the Hengduan Mountains run in a north-south orientation, while the others predominantly follow an east-west orientation (Figure 1) (中國科學院地理科學與資源研究所, 2007a).

Figure 1: Major mountain ranges in our country



Map reference: 中華人民共和國自然資源部審圖號 GS(2023)2766 號 (Date of reference: 30 April 2025)

- The Himalayas: The Himalayas (Figure 2) are the most majestic and towering mountain range in the world, consisting of several roughly parallel ridges. Situated along the southern edge of the Qinghai-Tibet Plateau, the range begins in the west at Mt. Nanga Parbat in Kashmir ($35^{\circ}14'21''\text{N}$, $74^{\circ}35'24''\text{E}$, elevation 8,125 m) and extends eastward to Mt. Namcha Barwa at the great bend of the Yarlung Tsangpo River ($29^{\circ}37'51''\text{N}$, $95^{\circ}03'31''\text{E}$, elevation 7,756 m), covering a total length of approximately 2,500 km. Its main peak, Mount Qomolangma, rises to 8,844.43 m, making it the highest mountain in the world.

Figure 2: The Himalayas



- Gangdise Mountains: The Gangdise Mountains form a crucial geographic division on the Qinghai-Tibet Plateau, serving as the main watershed between the external drainage systems flowing into the Indian Ocean and the internal drainage systems of northern part of Xizang Zizhiqu. Located in the southwestern Xizang Zizhiqu, north of the Himalayas and running roughly parallel to them, the range begins in the west at the southeastern segment of the Karakoram Mountains ($34^{\circ}15'\text{N}$, $78^{\circ}20'\text{E}$) and extends eastward to the southwest of Namtso Lake (approximately $29^{\circ}20'\text{N}$, $89^{\circ}10'\text{E}$), where it connects with the Nyenchen Tanglha Mountains. Its elevations range from 5,500 to 6,000 m, with Mount Lobo in the eastern section reaching 7,095 m, the highest peak in the range.
- Tanglha Mountains: The Tanglha Mountains, also known as the Dangla Mountains, are the origin of the Nu River, Lancang River, and Chang Jiang. Originating near 90°E longitude, they connect to the eastern end of the Karakoram Mountains and extend eastward across the northern part of Xizang Zizhiqu (approximately 32° – 33°N latitude). Part of the range forms the boundary between the Xizang Zizhiqu and Qinghai Province. The eastern section gradually slopes southeastward, linking with the Hengduan Mountains. The Tanglha Mountains are up to 150 km wide, with elevations ranging from 5,500 to 6,000 m. Their highest peak, Geladandong Snow Mountain, rises to 6,621 m.

- **Nyenchen Tanglha Mountains:** The Nyenchen Tanglha Mountains are one of the principal mountain ranges of the Qinghai-Tibet Plateau, dividing the watersheds of the Yarlung Tsangpo River and the Nu River. Located in the central and eastern parts of the Xizang Zizhiqu, the range runs roughly east-west. It begins in the west at the tail end of the Gangdise Mountains near 90°E longitude and extends northeastward. Near Nagqu, it curves into an arc along a northwest-southeast fault zone before bending southeastward to merge with the Hengduan Mountains. The range stretches 1,400 km, with an average width of 80 km and elevations ranging from 5,000 to 6,000 m. Its highest peak, Nyenchen Tanglha Peak, reaches 7,111 m.
- **Hengduan Mountains:** The Hengduan Mountains are one of the youngest mountain systems in the world and the longest, widest, and most prominent north-south mountain range in our country. Located in the southeastern part of the Qinghai-Tibet Plateau, the mountains are the north-south mountain ranges spanning western Sichuan and Yunnan provinces and the eastern part of the Xizang Zizhiqu. The range lies between 22°–32°05'N latitude and 97°–103°E longitude, covering an area of over 600,000 km². Its ridges and valleys feature dramatic height differences. The Qionglai Mountains, for instance, exceed 3,000 m in elevation, with their main peak, Mount Siguniang, reaching 6,250 m. The highest peak in the Hengduan Mountains is Mount Gongga in the Daxue Mountains, which rises to 7,556 m.
- **Karakoram Mountains:** The Karakoram Mountains have extensive glacial coverage. This prominent range in Central Asia stretches along the borders of our country, Tajikistan, Afghanistan, Pakistan, and India. Including its eastern extension (the Qiangtangmo and Pantong Mountains on the Qinghai-Tibet Plateau), the Karakoram Mountains span about 240 km in width and 800 km in length, with an average elevation exceeding 5,500 m. The range is home to four peaks over 8,000 m in height.
- **Kunlun Mountains:** The Kunlun Mountains are a towering range stretching across the western part of our country. To the west, they begin at the eastern Pamir Plateau and extend eastward to the upper Qaidam River valley, where they connect with the Bayan Har and Animaqing Mountains (Jishi Mountains) near 97°–99°E longitude. The Kunlun range spans over 2,500 km and decreases in elevation from west to east. It is divided into three sections:
 - Western Kunlun Mountains: Featuring 3 peaks over 7,000 m and 7 peaks over 6,000 m.
 - Central Kunlun Mountains: Consist of 8 peaks over 6,000 m.
 - Eastern Kunlun Mountains: Consist of 4 peaks over 6,000 m and 8 peaks over 5,000 m.
- **Tianshan Mountains:** The Tianshan Mountains are a prominent mountain system in central Asia's interior and one of the most humid regions within the world's arid zones. In our country, the range traverses the central part of the Xinjiang Uygur Autonomous Region, running latitudinally from Hami County in the east (96°10'E) to Wuqia County in the northwest (74°50'E). The range spans roughly 1,760 km in length, crossing five degrees of latitude (40°31'–45°23'N) and measuring 250–350 km wide, with a total area of about 410,000 km². Most of the mountains exceed 4,000 m in elevation. Mount Tomur, located in the western section, is the highest peak at 7,435.3 m, while Mount Bogda in the east rises to 5,445 m.

- **Altai Mountains:** The Altai Mountains are a magnificent mountain system in Asia, running in a northwest-southeast orientation and crossing the borders of our country, Kazakhstan, Russia, and Mongolia. The range spans over 2,000 km, with the Chinese section extending more than 500 km along the southern slopes of its central segment. To the south, the range borders the Junggar Basin. The main ridges rise to over 3,000 m in elevation, with Friendship Peak in the north reaching 4,374 m. The mountains are the widest in the west and gradually become narrower and lower toward the southeast.
- **Yanshan Mountains:** The Yanshan Mountains are a well-known range in the northern part of our country. Broadly, they refer to the region south of the Bashang Plateau, north of the Hebei Plain, east of the Baihe Valley, and west of Shanhaiguan. This area lies between 39°40'–42°10'N latitude and 115°45'–119°50'E longitude. More specifically, the Yanshan Mountains encompass the mountainous area south of the ridges of Boluonuo, Zhongguan, and Dazhangzi. These medium-height mountains, shaped by erosion, have elevations ranging from 500 to 1,500 m, sloping from higher elevations in the north to lower elevations in the south. The range's main peak, Mount Wuling, reaches 2,116 m.

III. The main plateaux of our country

Our country is home to four major plateaux, each with distinctive features. They are the Qinghai-Tibet Plateau, known as the “Roof of the World”; the Loess Plateau, with the world's most extensive distribution of loess and the most representative loess landforms; the Yunnan-Guizhou Plateau, characterised by its extremely rugged terrain; and the Inner Mongolian Plateau, renowned for its vast, flat, and open landscapes (Figure 3) (中國科學院地理科學與資源研究所, 2007b).

Figure 3: Four major plateaux in our country



Map reference: 中華人民共和國自然資源部審圖號 GS(2023)2767 號 (Date of reference: 30 April 2025)

- **Qinghai-Tibet Plateau:** The Qinghai-Tibet Plateau (Figure 4) is located at the highest third topographic steps of our country and is the tallest plateau in the world. It extends from the Pamir Plateau in the west to the Hengduan Mountains in the east, bordered by the Kunlun, Altyn-Tagh, and Qilian Mountains to the north and reaching the Himalayas to the south. While its southwestern edges are shared with countries such as India, Pakistan, Nepal, Sikkim, Bhutan, and Myanmar, most of the plateau lies within our borders. It encompasses most of the Tibet Autonomous Region, the majority of Qinghai Province, and part of Xinjiang Uygur Autonomous Region, Gansu Province, Sichuan Province, and Yunnan Province. The plateau spans between 25° and 40°N latitude and 74° and 104°E longitude, covering approximately one-quarter of our country's total land area.

Figure 4: Qinghai-Tibet Plateau



- The Yunnan-Guizhou Plateau (Figure 5) is situated on the country's second topographic step and is divided into two main regions:
 - Yunnan Plateau: The Yunnan Plateau forms part of the Yunnan-Guizhou Plateau, reaching as far as the eastern boundary of Yunnan Province. Its southern edge extends to the line of Guangnan, Tonghai, and Eshan, while its western boundary lies near Dali and Lijiang. The northern boundary is roughly at 28°N latitude. The central and eastern parts of Yunnan Province, along with the southwestern region of Sichuan Province, constitute the main body of the plateau.
 - Guizhou Plateau: The Guizhou Plateau, also part of the second topographic step, is a subtropical karst plateau between the Guangxi Hills and the Sichuan Basin. It spans from 24°35' to 29°15'N latitude and 103°35' to 109°35'E longitude, covering an area of 176,360 km². Its average elevation is approximately 1,000 m.

Figure 5: Yunnan-Guizhou Plateau



- **Loess Plateau:** The Loess Plateau (Figure 6) is world-famous for its extensive loess deposits. This plateau spans large parts or portions of seven provinces and regions, including Qinghai, Gansu, Ningxia, Inner Mongolia, Shaanxi, Shanxi, and Henan. It lies between 34° and 40°N latitude and 102° and 114°E longitude, covering an area of roughly 300,000 km². Sloping from northwest to southeast, the plateau possesses elevations that range between 1,000 and 2,000 m. While some parts feature rocky mountainous terrain, most of the plateau is blanketed by thick layers of loess.

Figure 6: Loess Plateau



- **Inner Mongolian Plateau:** The Inner Mongolian Plateau (Figure 7) forms part of the larger Mongolian Plateau. It is located north of the Yinshan Mountains, west of the Greater Khingan Range, extending to the northern border of our country and westward to approximately 106°E longitude. It spans between 40°20' and 50°50'N latitude and 106° and 121°40'E longitude, covering an area of around 340,000 km². Administratively, it includes the western part of Hulunbuir League, most of Xilingol League, Ulanqab League, and the northern part of Bayannur League. In a broader sense, the Inner Mongolian Plateau also includes the Ordos Plateau, located south of the Yinshan Mountains, and the Alxa Plateau, situated west of the Helan Mountains.

Figure 7: Inner Mongolian Plateau



III. Conclusion

The impressive mountain ranges and plateaux of our country not only define its physical geography but also serve as vital cultural, ecological, and economic resources. From the towering peaks of the Himalayas to the flat, open landscapes of the Inner Mongolian Plateau, these natural formations showcase our country's diverse terrain. This terrain not only affect the climatic conditions of our country but also has a direct effect on human activities. To understand more about their interrelationship, please make reference to the other infosheets.

References

1. 中國科學院地理科學與資源研究所. (2007a). “中國的山脈”
https://igsnrr.cas.cn/cbkx/kpyd/zgdl/cndm/202009/t20200910_5692387.html
2. 中國科學院地理科學與資源研究所. (2007b). “中國的高原”
https://igsnrr.cas.cn/cbkx/kpyd/zgdl/cndm/202009/t20200910_5692376.html
3. 中國地質科學院地質研究 (2002). “變質岩—破解喜馬拉雅山形成奧秘的「黑匣子」”
http://www.igeo.cgs.gov.cn/kpyd/dxzs/201812/t20181207_472973.html