

Karakoram Range, Location, Physiography, Drainage, Ecology

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The Karakoram Range, also known as **Krishnagiri**, is the northernmost **Trans-Himalayan range** in India. The name Karakoram is derived from a Turkic term meaning “**Black Rock**” or “**Black Mountain.**”

The range is geopolitically significant as the borders of India, Pakistan, China, Afghanistan, and Tajikistan converge in this region.

Karakoram Range Location and Extent

- The Karakoram range is a mountain range in **Asia** located primarily in the **Kashmir region**.
- It lies to the **north of the Great Himalayan Range** and extends across **Ladakh in India, Gilgit-Baltistan in Pakistan, and Xinjiang in China**.
- It is a part of the **Trans-Himalayan mountain system**.
- It is bounded by Pamir Plateau in the northwest, Kunlun Mountains in the north, Himalayan Range in the south.

- The range runs in a **north-west to south-east direction** and acts as a natural barrier between the Indian subcontinent and Central Asia.

Karakoram Range Geology

- The Karakoram range was formed during the **Cenozoic era**.
- It is a **young fold mountain range**. It formed due to the collision of the **Indian Plate with the Eurasian Plate**.
- Due to active tectonics, the region is **highly prone to earthquakes and landslides**.
- The region is structurally complex and consists mainly of **igneous and metamorphic rocks, such as granite and gneiss**.
- Major geological features include the **Karakoram Fault** and the **Indus-Tsangpo Suture Zone**, which indicate intense tectonic activity.

Karakoram Range Relief and Physiography

- The Karakoram Range is known for its **extremely rugged and steep terrain**.
- The Karakoram Range contains some of the highest peaks on Earth including **K2 (Mount Godwin-Austen)**, at 8,611 metres, which is the **second highest peak in the world**.
- The Karakoram Range is marked by **deep, narrow, and glaciated valleys** formed by tectonic uplift and intense glacial erosion. Important valleys include the **Nubra Valley in Ladakh, Hunza Valley in Gilgit-Baltistan, Shigar Valley, Shimshal Valley**.
- The Karakoram Range contains several high-altitude passes such as the **Karakoram Pass, Khunjerab Pass, and Saser La**, which have historically served as trade and strategic routes between South Asia, Central Asia, and China.

Karakoram Range Glaciers

- The Karakoram Range is one of the **most heavily glaciated regions** outside the polar areas.
- Major glaciers include the **Siachen Glacier, Baltoro Glacier, Biafo Glacier, and Hispar Glacier**.
- The region exhibits the **Karakoram Anomaly**, where many glaciers are stable or advancing despite global warming trends. This anomaly is attributed to high-altitude snowfall, lower summer temperatures, and the dominance of western disturbances.

Karakoram Range Drainage

- The rivers of the Karakoram Range are mainly glacier-fed.
- The Karakoram Range acts as a **water divide**, with rivers on its southern side draining into the **Indus basin** and those on the northern side draining into the **Yarkand - Tarim basin**.
- Rivers such as the **Indus, Shyok, Nubra, and Hunza** originate from or are fed by Karakoram glaciers.

Karakoram Range Climate

- Karakoram Range experiences a cold desert climate with extremely low annual precipitation.
- The Indian monsoon has very little influence on the region, and most precipitation occurs in the form of winter snowfall due to western disturbances.
- The region experiences long, severe winters and short, cool summers, along with large diurnal temperature variations.

Karakoram Range Ecology and Biodiversity

- Due to harsh climatic conditions, vegetation in the Karakoram is sparse and mainly consists of alpine grasses and cold desert shrubs.
- Despite extreme conditions, the region supports rare wildlife such as the **snow leopard, Himalayan ibex, and blue sheep.**

Source: <https://vajiramandravi.com/current-affairs/karakoram-range/>

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