

Alpenglow Phenomenon

By IASToppers | 2024-01-30 16:15:00



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An astronaut stationed aboard the [International Space Station \(ISS\)](#) recently shared images of the **Alpenglow phenomenon** near the [Hindu-Kush mountain range](#).



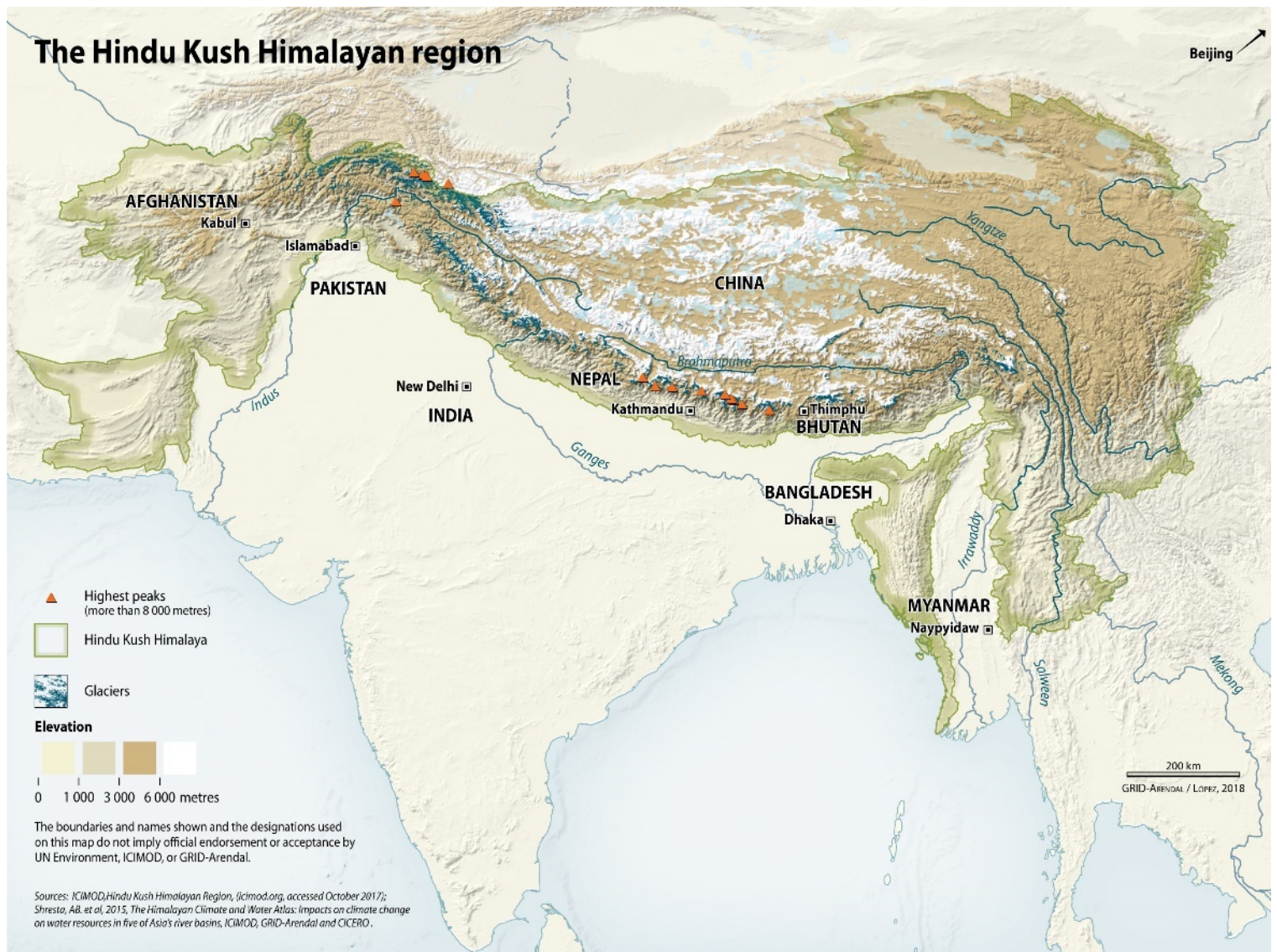
[Ref- Republic World]

About Alpenglow Phenomenon:

- It is an **optical phenomenon** characterized by a horizontal reddish glow near the horizon, opposite the Sun, when it is **just below the horizon**.
- Alpenglow refers to the **indirect sunlight** reflected or diffracted by the atmosphere before **sunrise or after sunset**.
- **Soft shadows** in addition to the reddish colour can be observed when Alpenglow occurs.
- It occurs when direct sunlight around sunrise or sunset is **reflected off airborne precipitation**, ice crystals, or particulates in the **lower atmosphere**, as sun has no direct path to mountains.
- After sunset in **absence of aerosols** in the eastern sky, it can be lit up by the remaining red light scattered **above the edge of Earth's shadow**.
- It produces a pinkish band on the opposite side of the Sun's direction, named the **Belt of Venus**.

About Hindu Kush Mountain Range:

- It is an expansive **800 km long range** situated on the Iranian plateau in Central and South Asia, west of the Himalayas.
- The Hindu Kush forms the **western segment** of the Hindu Kush Himalayan(HKH) region.
- The region spans **eight countries**, including Afghanistan, Bangladesh, Bhutan, China, India, Nepal, Myanmar, and Pakistan.
- **Notable cities** in this region are Srinagar and Dehradun (India), Kabul (Afghanistan), Kathmandu (Nepal), Peshawar and Quetta (Pakistan), and Xining (China).
- About **two billion people are dependent** on crucial water resources, ecosystem services, and sustenance.
- The region is experiencing **alarming rates of warming**, which is three times the global average.



[Ref- GRID]