



## CLIMATE CHANGE AND HINDUKUSH HIMALAYAS [HKH] - GS III MAINS

**Q.** The impacts of climate change are profoundly felt in the HKH, the water tower of Asia. Examine (15 marks, 250 words)

**News:** *Scientists declare Hindu Kush Himalaya a biosphere on brink of 'collapse'*

### What's in the news?

- Recently, Scientists declared the Hindu Kush Himalayan region a biosphere on the brink of collapse and called for bold action and urgent finance to prevent nature loss in one of the most biodiverse areas on Earth.

### Key details:

#### 1. A Region on the Brink:

##### a. Biodiversity Hotspot:

- The HKH region, characterized by its remarkable biodiversity, is described as a 'biosphere on the brink' by experts.

##### b. Scope of Crisis:

- The speed and scale of habitat and nature loss in the HKH region are deemed 'catastrophic,' and urgent action is required.

#### 2. Alarming Statistics:

##### a. Biodiversity Richness:

- The HKH region boasts four of the world's 36 global biodiversity hotspots, 575 Protected Areas, and 335 important bird areas.

##### b. Biodiversity Loss:

- Despite conservation efforts, the region has witnessed the loss of 70% of its original biodiversity over the last century.

##### c. Human Dependence:

- 85% of mountain communities in the HKH region rely on this biodiversity for food, water, flood control and cultural identity.

##### d. Population Pressure:

- With 241 million people residing in the HKH region, 31% face food insecurity, and half experience various forms of malnutrition.



### 3. Human Impact:

#### a. Threat to Humanity:

- The declining nature in the HKH region now endangers not only animal and plant life but also human societies.

#### b. Water Tower of Asia:

- This region, known as the 'Water Tower of Asia,' supplies essential ecosystem services, including clean water for one-third of the global population.

### Challenges Faced by the Hindu Kush Mountains:

#### 1. Climate Change:

- The impacts of climate change are profoundly felt in the HKH, with rising temperatures leading to glacier retreat, changes in snowfall patterns and increased frequency of extreme weather events.
- These changes threaten water security, agriculture and the livelihoods of millions of people.

#### 2. Environmental Degradation:

- Deforestation, overgrazing, unsustainable land use practices and infrastructure development are causing environmental degradation, including soil erosion, loss of biodiversity, and water pollution.

#### 3. Socio-economic Vulnerabilities:

- Many communities in the HKH region face poverty, limited access to basic services, and socio-economic disparities. These vulnerabilities are exacerbated by environmental and climatic changes.

#### 4. Geopolitical Tensions:

- The HKH spans several countries with complex political relations, which can complicate regional cooperation on environmental conservation and sustainable development.

#### Government Initiatives:

- The **International Centre for Integrated Mountain Development (ICIMOD)** is a prominent regional organization dedicated to improving the lives of mountain people and protecting the environment in the Hindu Kush Himalayas.
- India has launched a **National Mission to sustain the Himalayan Ecosystem** as a part of the National Action Plan on Climate Change.



## Go back to basics:

### Hindu Kush Mountains:

- Stretching over 3500 kilometers and across **eight countries**: Afghanistan, Bangladesh, Bhutan, China, India, Nepal, Myanmar and Pakistan, **HKH is one of the largest volumes of ice and snow outside of the Arctic and Antarctica.**
- 4 of the world's 36 global biodiversity hotspots are in this region.
- Himalaya, Indo-Burma, Mountains of Southwest China, and Mountains of Central Asia
- **Water Tower of Asia**: It is called the 'Water Tower of Asia'. **At least 12 rivers** fan out in every direction across the Asian continent from HKH:
  - The Indus, Ganga and Brahmaputra towards the Arabian Sea and Bay of Bengal
  - Syr Darya and Amu Darya towards the now-dead Aral Sea
  - The Tarim toward the Taklamakan
  - The Yellow River towards the Gulf of Bohai
  - The Yangtze towards the East China Sea
  - The Mekong towards the South China Sea
  - The Chindwin, Salween and Irrawaddy towards the Andaman Sea.

