Climate Change Vulnerability of Himalayas

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Why is in news? Extreme weather events in the Himalayas are a warning. Ecology must be respected while planning development

The large toll taken by cloudbursts and landslides in Himachal Pradesh is another sobering reminder to respect the Himalayan region's fragile ecology. At least 50 people have lost their lives as torrential rain pummeled the state in the past three days making the already precarious hill slopes unstable.

According to the Himachal Pradesh State Disaster Management Authority, higher-than-normal rainfall claimed more than 150lives in the state between June 24 and July 22.

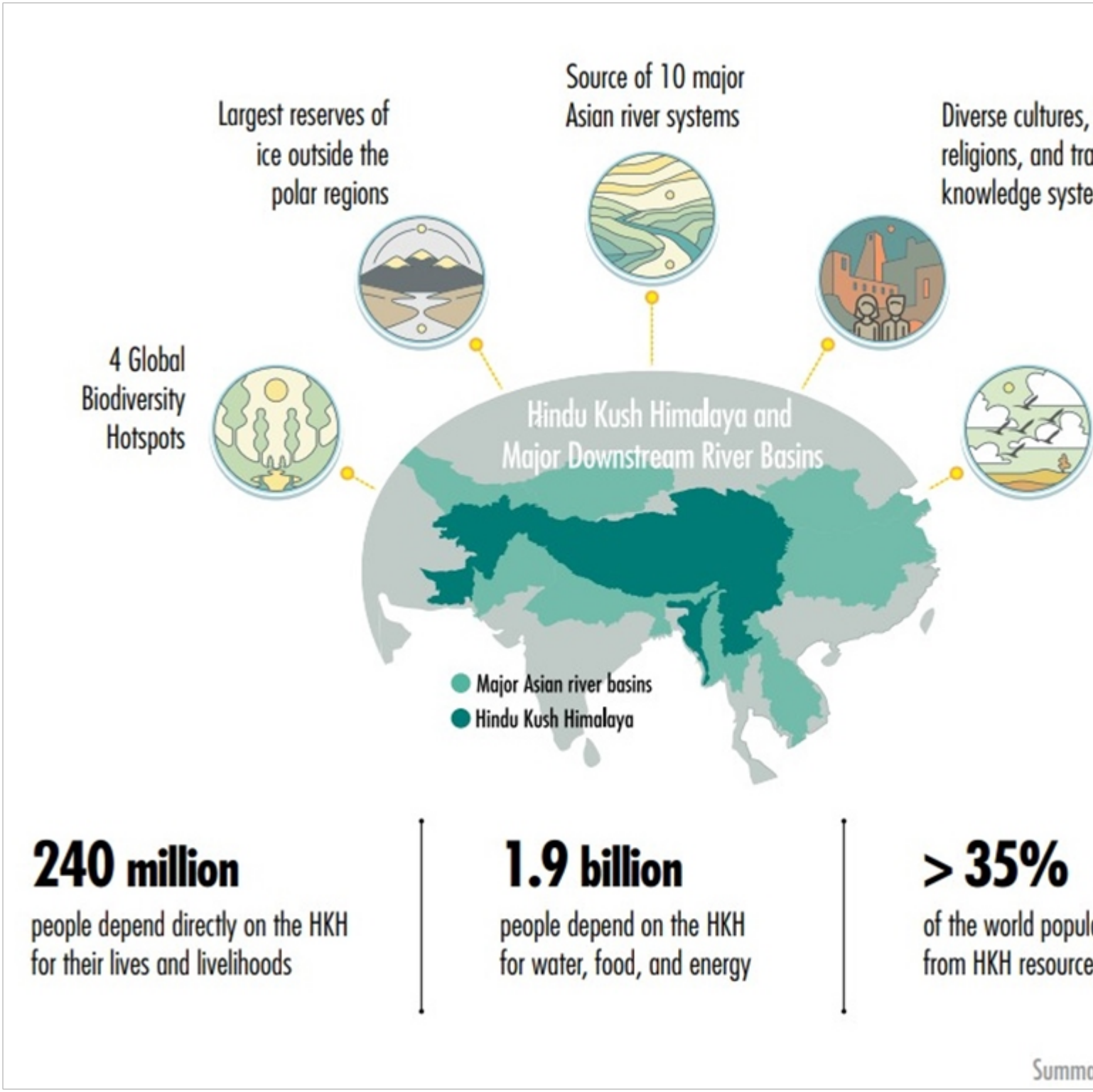
About the Himalayas:

The Himalayan landscape is **susceptible to landslides and earthquakes**.

It was formed **due to the collision of Indian and Eurasian plates**, the northward movement of the former puts continuous stress on the rocks, rendering them weak and prone to landslides and earthquakes.

This, combined with **steep slopes, rugged topography, high seismic vulnerability, and rainfall**, makes the region one of the most disaster prone areas in the world.

The young mountains are **geologically active** and the region has a long history of downslope movement of rocks and boulders.



Threats to Himalayan ecology:

Due to **population growth, industrial and commercial activity**, the fragile ecology is under a great stressThe common threats are deforestation, soil erosion and pressure on restricted land.

Climate change is impacting people and threatening wildlife in the Himalayas. Many glaciers are melting and forming lakes prone to bursting and downstream flooding. Traditional water springs have dried up, limiting the water supply.

The **unplanned and unauthorised construction** has led to the blocking of the natural flow of water, which eventually results in frequent landslides.

Himalayan slopes have become extremely unstable in the last few decades due to **increased construction, hydroelectric projects, and the widening of the National Highway**.

The conversion of forests for **agriculture and exploitation** for timber, fodder and fuel wood **threaten the biodiversity** in this region.

The **creation of numerous dams without due environmental impact assessment** could lead to the submergence of arable lands and biodiversity hotspots.

Not only would valley habitats be inundated by the creation of reservoirs, but villagers would be displacedThe effect of dams on fisheries and fish ecology is also a matter of concern.

Mitigation measures:

It is important to have **early warning and better weather forecast systems** in order to forecast the disaster and alert the local population and tourists.

There is a **need for a trans-boundary coalition of Himalayan countries** to share and disseminate knowledge about the mountains and preservation of the ecology there.

What is most critical is to review the area's present status and **draw up a sustainable plan that respects the specific requirements of this fragile region** and the impact of the climate crisis.

Initiating a dialogue on adverse impacts of commercial tourism and **promoting ecotourism.**

Government must strive for achieving s**ustainable development not only development that is against the ecology**.

Honest and stringent Detailed Project Reports (DPR), Environment Impact Assessment (EIA) and Social Impact Assessment (SIA) are needed before implementing any project.

Restriction on the construction and other developmental activities such as roads and dams, limiting agriculture to valleys and areas with moderate slopes, and control on the development of large settlements in the high vulnerability zones, should be enforced.

Some positive actions like promoting large-scale afforestation programs and the construction of bunds to reduce water flow.

Conclusion:

Climate change is **acting as a force multiplier** and making landslides, flash floods and cloudbursts more disastrous.

Any development in IHR must respect the landform and the ecology.

Anthropogenic disturbances in the name of development must be curtailed in order to meet the targets of the **Sendai Framework for Disaster Risk Reduction** (2015-2030).