

Cold Desert Declared India's 13th UNESCO Biosphere Reserve

- **UNESCO declared** the **Cold Desert Biosphere Reserve** in Himachal Pradesh as India's **13th UNESCO Biosphere Reserve**.
- **Global Network:** Added to the **World Network of Biosphere Reserves (WNBR)**, which now has **785 sites worldwide**.
- **Significance:** First **high-altitude cold desert** Biosphere Reserve (BR) of India.

2. Location & Geography

- **State:** Himachal Pradesh (Trans-Himalayan region, Spiti Valley).
- **Total Area:** **7,770 km²**.
- **Altitude Range:** **3,300 – 6,600 m** above sea level.
- **Landscape features:**
 - Windswept plateaus
 - Rugged high-altitude cold deserts
 - Glacial valleys
 - Alpine lakes
- **Protected Areas Included:**
 - **Pin Valley National Park**
 - **Chandratal & Sarchu**
 - **Kibber Wildlife Sanctuary**

3. Biodiversity Significance

Flora

- **732 vascular plant species.**

- **30 endemics** (found only here).
- **157 near-endemics** of Indian Himalayas.

Fauna (Iconic species)

- **Snow Leopard** (*Panthera uncia*)
- **Himalayan Ibex** (*Capra sibirica*)
- **Blue Sheep (Bharal)** (*Pseudois nayaur*)
- **Himalayan Wolf** (*Canis lupus chanco*)
- **Himalayan Snowcock** (*Tetraogallus himalayensis*)
- **Golden Eagle** (*Aquila chrysaetos daphanea*)

☐ Acts as a critical habitat for high-altitude and endangered species.

4. Human & Cultural Aspects

- **Population:** ~12,000 inhabitants in scattered villages.
- **Livelihoods:**
 - Traditional pastoralism
 - Yak & goat herding
 - Barley and pea farming
 - Tibetan herbal medicine
- **Cultural Practices:**
 - Strong **Buddhist monastic traditions**.
 - **Community councils (local governance)** regulate use of fragile alpine resources.
- Represents a **balance between cultural heritage & fragile ecosystem management**.

5. Importance of Designation

- **Conservation:** Protects one of the world's coldest and driest ecosystems.
- **Sustainability:** Supports eco-friendly livelihoods of local communities.
- **Symbolic Value:** Reflects India's commitment to conservation + sustainable development.
- **Learning Site:** Serves as a **"learning place for sustainable development"** under UNESCO's **MAB Programme**.

6. UNESCO's Man and the Biosphere (MAB) Programme

- **Launched:** 1971 (celebrated **50 years in 2025**).
- **Objective:** Build scientific basis for improving relationships between people & environment.
- **Approach:** Combines natural & social sciences.
- **Functions of Biosphere Reserves:**
 1. **Conservation** → Biodiversity & cultural heritage.
 2. **Development** → Eco-friendly socio-economic growth.
 3. **Logistic Support** → Research, education, monitoring, conflict resolution.
- **Purpose:** Provide **local solutions to global environmental challenges**.

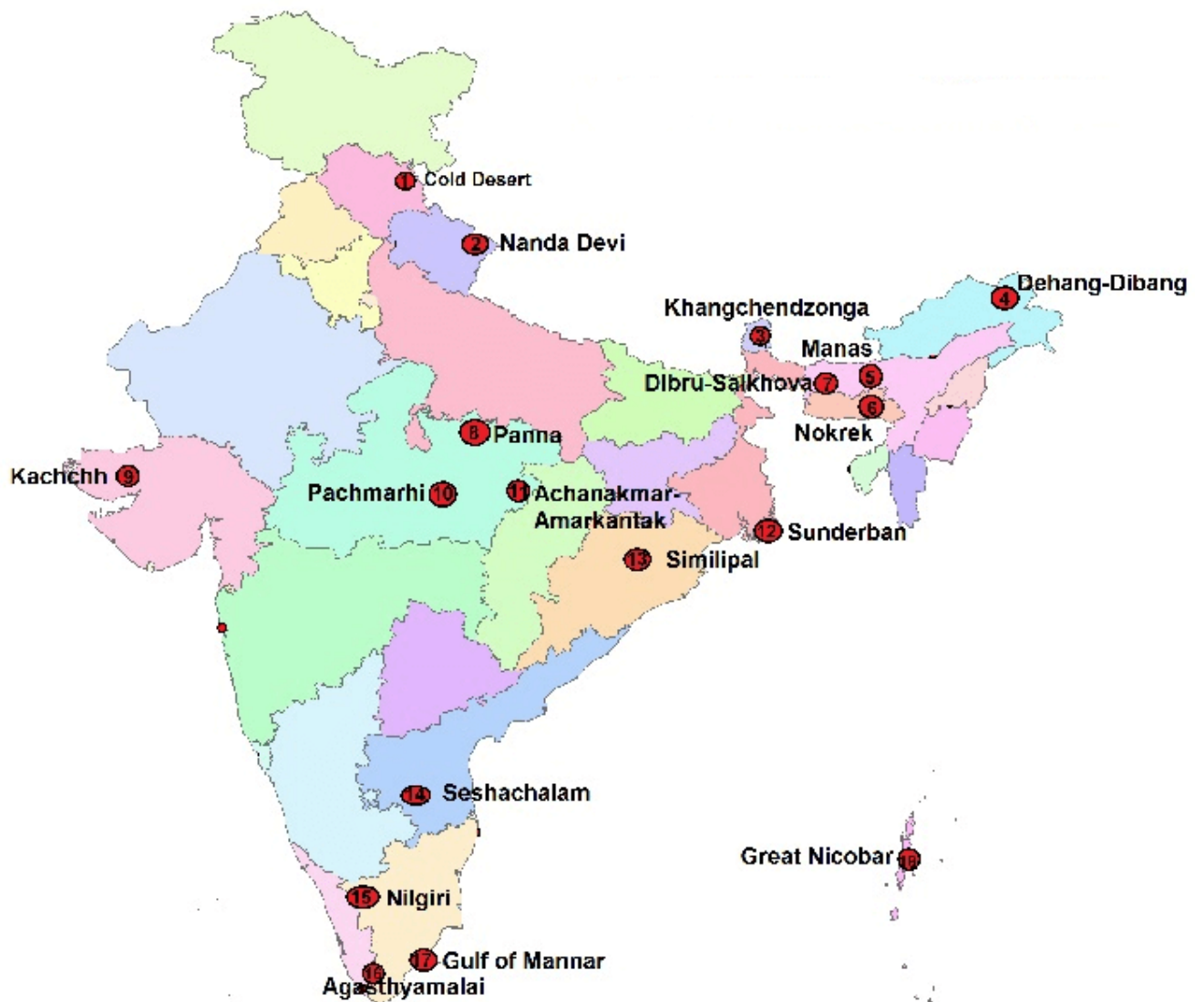
7. About the 5th World Congress of Biosphere Reserves (WCBR)

- **Largest & most influential conference** under MAB Programme.
- **Participants:** 3,000+ delegates from 100+ countries.
- **First time in Asia** (earlier held in Europe/Americas only).
- **Significance:** Strengthens global inclusivity of the programme.

8. India's UNESCO-Recognized Biosphere Reserves (13)

1. Nilgiri (1986)
2. Nanda Devi (1988)

3. Nokrek (1988)
4. Gulf of Mannar (1989)
5. Sundarbans (1989)
6. Similipal (2009)
7. Pachmarhi (2009)
8. Achanakmar-Amarkantak (2012)
9. Great Nicobar (2013)
10. Agasthyamala (2016)
11. Khangchendzonga (2018)
12. Panna (2020)
13. **Cold Desert (2025)**



Map shows the list of 18 Biosphere Reserves in India

9. UPSC Relevance

- **Prelims:** Location, features, flora/fauna, UNESCO recognition, WNBR numbers.
- **Mains (GS-III: Environment):**
 - Role of Biosphere Reserves in conservation & sustainable development.
 - Integration of local communities in conservation efforts.
- **Essay / Ethics:** Example of “*harmony between people and nature*”.

□ **Summary in One Line:**

The Cold Desert Biosphere Reserve of Himachal Pradesh, covering Pin Valley NP and adjoining areas, is India's 13th UNESCO Biosphere Reserve—marking the nation's first high-altitude cold desert reserve, combining biodiversity conservation with community-based sustainable practices under UNESCO's MAB Programme.

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