



## India-Bhutan Relations

**For Prelims:** [Green energy](#), [Hydrogen-fueled bus](#), [Pilgrimage to Buddhist sites in India](#), [South Asian Association for Regional Cooperation \(SAARC\)](#), [BBIN \(Bangladesh, Bhutan, India, and Nepal\) Motor Vehicles Agreement](#)

**For Mains:** India-Bhutan Relations, Significance, Challenges and Way Forward

[Source: PIB](#)

### Why in News?

**Bhutanese PM Tshering Tobgay's recent visit to India** highlighted the strong diplomatic relations and cooperation between [Bhutan](#) and [India](#).

- Several key events and meetings took place during his visit, which underscored their **shared commitment to sustainability**, [green energy](#), and deepening bilateral ties.

//





**Note:**

- Bhutan is the **world's first carbon country**.
- Bhutan is best **known for its philosophy of promoting** [Gross National Happiness \(GNH\)](#) over [Gross Domestic Product \(GDP\)](#) and productivity.

**What are the Key Highlights of the Bilateral Meeting?**

- **Showcasing India's Green Hydrogen Advancements:** India showcased its progress in [green hydrogen technology](#) by presenting a [hydrogen-fueled bus](#), highlighting the country's advancements in sustainable mobility.
  - India emphasised the country's commitment to sustainable energy solutions and expressed **eagerness to collaborate with Bhutan** to promote a cleaner, greener future.
- **Opportunities for Energy Collaboration:** The discussion also focused on expanding bilateral cooperation, particularly in the energy sector.
  - Bhutan's delegation expressed a **keen interest in adopting green hydrogen mobility**, aligning with Bhutan's spirit for environmental sustainability and transitioning to clean energy solutions.
- **Significance:** India aims to position itself as a global leader in green hydrogen production, presenting **its advancements to Bhutan's leadership and highlighting mutual benefits**.

- The shared vision for sustainable development between the two nations establishes a strong basis for collaboration in [renewable energy](#), positioning Bhutan as a key partner in [India's green energy transition](#).

## How Have India-Bhutan Relations Been?

- **Diplomatic Background:** Diplomatic ties between India and Bhutan began in 1968, grounded in the 1949 [Treaty of Friendship and Cooperation](#), which was updated in 2007 to better reflect contemporary needs.
- **Cultural Ties:** The India-Bhutan Foundation, established in 2003, promotes educational, cultural, and scientific exchanges.
  - [Pilgrimage to Buddhist sites in India](#) remains a significant cultural connection.
- **Recognition and Awards:** On **Bhutan's 114<sup>th</sup> National Day**, the Prime Minister of India received the **Order of the Druk Gyalpo**, [Bhutan's highest civilian honour](#), for his contributions to the India-Bhutan relationship.
- **Development Partnership:** India has been a **consistent partner in Bhutan's socio-economic development**, supporting its [Five-Year Plans](#) since the first one in 1971.
  - For **Bhutan's 12<sup>th</sup> Five-Year Plan (2018-2023)**, India provided Rs 5,000 crores, covering various developmental projects.
- **Hydropower Cooperation:** Hydropower cooperation is a cornerstone of India-Bhutan relations. India has helped construct **four major hydroelectric projects (HEPs)** in Bhutan.
  - Bhutan has been permitted to sell 64 MW Basochhu HEP's electricity in India's [Day Ahead Market \(DAM\)](#).
- **Cooperation in New and Emerging Areas:**
  - **Space Cooperation:** A significant new area, with the **India-Bhutan SAT**, launched in November 2022.
    - The satellite aids in natural resource management and has a digital repeater serving the amateur radio community.
  - **Fin-tech:** Launches include the [RuPay Card](#) (2019, 2020 phases) and the [Bharat Interface for Money \(BHIM\)](#) app (2021) to enable cashless payments and cross-border interoperability.
- **Commerce and Trade:** India is **Bhutan's top trading partner**, with bilateral trade tripling from USD 484 million in 2014-15 to USD 1,615 million in 2022-23.
  - The 2007 India-Bhutan Friendship Treaty and the 2016 **Trade, Commerce, and Transit Agreement** establish a [free trade regime](#), with duty-free transit for Bhutan's goods through India.
  - Indian investments constitute 50% of Bhutan's [Foreign Direct Investment \(FDI\)](#), spanning various sectors like banking, manufacturing, hospitality, and education.
  - Bhutan's **plans for a regional economic hub in Gelephu**, mark a significant step towards regional development and connectivity.
    - The project, **initiated by Bhutan's King in December 2023**, aims to establish the [Gelephu Mindfulness City \(GMC\)](#) spanning 1,000 square kilometres.
- **Financial Support:** In November 2022, a USD 200 million arrangement was made under the [South Asian Association for Regional Cooperation \(SAARC\) currency swap arrangement](#) to manage Indian rupee liquidity and ease foreign exchange pressures.
- **Healthcare Cooperation:** India supported Bhutan during the [Covid-19 pandemic](#) by providing **Covishield vaccine** doses and medical consignments.
  - India has also assisted in building hospitals and providing medical supplies.
- **Indian Diaspora in Bhutan:** Approximately 50,000 Indians work in Bhutan, contributing significantly to various sectors.
  - In 2023, Indian academic Sanjeev Mehta was awarded the **Pravasi Bharatiya Samman** for his contributions to education in Bhutan.

## Significance of Bhutan For India

- **Strategic Location:** Bhutan's location between India and China makes it crucial for India's security. It acts as a **buffer state**, preventing direct Chinese access to the Indian territory.
- **Shared Heritage:** India and Bhutan share deep cultural and historical ties, primarily through Buddhism. This cultural connection enhances mutual understanding and people-to-people

relations.

- **Biodiversity Conservation:** Bhutan's rich biodiversity is of ecological significance, and India's involvement in conservation efforts supports regional environmental goals.

## What are the Challenges in India-Bhutan Relations?

- **Boundary Disputes with China:** China's infrastructure development in disputed areas, particularly around the strategically significant [Doklam plateau near India](#), has raised concerns due to the **increased presence of the People's Liberation Army (PLA)**.
  - Concurrently, China and Bhutan are pursuing diplomatic efforts through a three-stage roadmap to amicably resolve boundary issues.
- **Geopolitical Implications for India:** The disputed Doklam region and the PLA's activities are of great concern for India, as any changes in control could compromise the [Siliguri corridor](#) (India's narrow link to its northeastern states).
  - India aims to maintain strong relations with Bhutan to safeguard its strategic interests and **prevent any shifts that might expose the Siliguri corridor** to security risks.
- **Concerns Over Hydropower Project:** Bhutan's hydropower industry plays a crucial role in its economy, with India being a significant partner in its advancement.
  - Concerns have emerged in Bhutan about the favourable conditions of certain hydropower projects for India, **leading to public dissent against Indian involvement in the sector.**
- **BBIN Initiative:** The original [BBIN \(Bangladesh, Bhutan, India, and Nepal\) Motor Vehicles Agreement](#) was signed by all four nations in June 2015. However, following objections in **Bhutan related to sustainability and environmental issues**, the Bhutanese parliament opted not to endorse the plan.
  - As a result, the other three countries moved forward with the vehicular movement initiative (**BIN-MVA**) in 2017.

## What can be the Way Forward?

- **Addressing Economic Concerns:** Ensure that trade agreements and hydropower projects are equitable, addressing Bhutan's concerns about dependency and perceived imbalances.
  - **Encourage Indian investments** in various sectors in Bhutan, reducing reliance on hydropower and fostering sustainable development.
- **Adapting to Global Changes:** Monitor and adapt to China's growing influence in the region, ensuring that Bhutan feels secure and supported by India in its foreign policy decisions.
  - **Collaborate on multilateral forums** that include other nations, promoting regional stability and economic growth.
- **Promoting Tourism:** Develop joint tourism initiatives that encourage Indian tourists to visit Bhutan, boosting economic ties while enhancing people-to-people connections.
  - Organize **cultural festivals and events** that showcase the rich heritage of both countries, encouraging mutual appreciation and understanding.

## Conclusion

Looking ahead, the India-Bhutan relationship holds significant potential for growth and collaboration. By prioritizing equitable economic practices and fostering cultural exchanges, both nations can deepen their ties. Addressing concerns related to boundary disputes and perceptions of interference will be essential for maintaining trust. Mutual respect and shared interests **can play a crucial role in ensuring stability and prosperity for both countries.**

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Mains

**Q.** Border management is a complex task due to difficult terrain and hostile relations with some countries. Elucidate the challenges and strategies for effective border management. **(2016).**

---

## India's Ageing Population

**For Prelims:** [Working-Age Population](#), [World Health Organization](#), [Dependency Ratio](#), [World Bank](#), [Replacement Level of Fertility](#), [Under-Five Mortality Rate](#) [One-Child Policy](#), [Pension System](#), [Internal migration](#).

**For Mains:** Concerns associated with the ageing population and population decline, Measures needed to deal with them.

**Source:** [IE](#)

### Why in News?

Recently, some politicians of India's **Southern state** expressed concerns about the [ageing and shrinking population](#) and emphasised a **law to incentivise** residents of the state to have **more children**.

- The **ageing population** is a **demographic trend** with an increasing proportion of individuals **aged 65 and older** compared to the [working-age population \(15-64\)](#).

### What do Data Say on Ageing and Overall Population Size in India?

- **Overall Population Increase:** India's population is projected to increase by **31.1 crore (311 million)** between **2011 and 2036**.
- **Concentration of Growth:** Almost half i.e., **17 crore** will be added in five states of **Bihar, UP, Maharashtra, West Bengal, and Madhya Pradesh**.
- **Regional Disparities:** **Uttar Pradesh** is projected to account for **19%** of total population growth, while the five Southern states **Andhra Pradesh, Karnataka, Kerala, Telangana, and Tamil Nadu** will contribute only **29 million**, or **9%** of the total growth.
- **Ageing Population Trends:** The number of individuals aged 60 years and older is expected to more than double from **10 crore (100 million)** in **2011** to **23 crore (230 million)** by **2036**, with their share of the total population rising from **8.4%** to **14.9%**.

## POPULATION BY PERCENT AGE IN DIFFERENT AGE BRACKETS

INDIA	2011	2036 (PROJECTED)
0-14 years	30.9	20.1
15-59 years	60.7	64.9
60+ years	8.4	14.9

Andhra Pradesh	2011	2036	Uttar Pradesh	2011	2036
0-14 years	25.2	15.7	0-14 years	36	22
15-59 years	64.8	65.3	15-59 years	56.7	66.1
60+ years	10.1	19	60+ years	7.3	11.9

Source: Population Projection by Ministry of Health and Family Welfare

- **State Variations in Ageing Population:** In **Kerala**, the proportion of individuals aged 60 and older is projected to rise from **13% in 2011 to 23% by 2036**, meaning nearly **1 in 4** individuals will be in this age group.
  - In **Uttar Pradesh**, the share of the **60+ population** is expected to rise from **7% in 2011 to 12% in 2036**.
- **North-South Divide:** The increase in the proportion of people aged 60 and older will be **smaller in Northern states** compared to the South.
  - Southern states **transitioned to lower fertility rates earlier**. E.g., **Uttar Pradesh** is projected to reach the **Replacement Level of Fertility** (2.1 children per woman) in **2025**, over two decades later than **Andhra Pradesh (2004)**.

### Note

The above data is based on the **latest population projections from a 2020 report** by a technical group within the **Union Ministry of Health and Family Welfare**.

### What are the Causes of Ageing and Shrinking Population?

- **Contraception and Family Planning:** The increased availability of **contraception and abortion** services allows individuals to have greater control over their reproductive choices.
- **Women's Economic Participation:** As women have increasingly entered the workforce, many have chosen to **delay childbirth or forego having children** altogether.
  - This shift is often driven by **career aspirations, financial stability**, and the pursuit of personal goals.
- **Improved Child Survival Rates:** According to the **World Health Organization (WHO)**, the **under-five mortality rate** (deaths per 1,000 live births) in India declined to **34 in 2019 from 126 in 1990**.
  - Between **1990 and 2019**, India achieved a **4.5% annual reduction** in under-five mortality, decreasing deaths from **3.4 million** in 1990 to **824,000** in 2019.
  - Due to decline in the under-five mortality rate, people are **less likely to give birth** to more children.
- **Urbanisation:** As more people move to urban areas, the **cost of living often rises**, making it more difficult for families to **afford children**. Urban lifestyles may also **prioritise careers** over family expansion.
- **Migration:** Indian migration due to foreign countries like UAE and USA also leads to decline in India's population.

## What Concerns are Associated with the Ageing Population?

- **Small Representation in Parliament:** Southern states with an ageing population and consequently **smaller populations** fear they could end up getting **penalised by way of fewer seats in Lok Sabha** for having made the demographic transition before the North.
  - **Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh** might gain more political representation at the **expense of Southern states**, affecting policy priorities.
- **Slowing GDP Growth:** An ageing population often leads to a **decline in the growth rate of GDP** primarily due to a decrease in the **labour force**.
  - Eg. In the US, the growth of the 20 to 64-year-old population is expected to decrease from **1.24% per year (1975-2015)** to only **0.29% (2015-2055)** leading to a **corresponding decline** in the growth rate of **GDP** and **aggregate consumption**.
- **High Dependency Ratio:** As the population ages, there will be a **higher ratio of dependents (both elderly and children)** to working-age individuals which increases the **burden** on the working-age population (15- to 64-year-olds).
  - According to the **World Bank** collection of development indicators, India's current age **dependency ratio of 47% in 2023** is expected to rise significantly.
- **Higher Public Expenditure:** The cost of public programs for **health care, pensions, and long-term care** will increase significantly as populations age.
  - Governments will need to **raise taxes or cut benefits** to manage these rising costs.
- **Intergenerational Equity Issues:** Younger populations might feel **unfairly taxed** to support the older generation, leading to potential societal divides and a **sense of injustice** regarding resource allocation.
- **Pressure for Institutional Reform:** As the population ages, there may be growing calls for reforms in **retirement age, social security benefits, and healthcare systems**.

## Shift from Population Explosion to Population Shrinkage

- Roughly **five decades ago**, the main **concern** facing India was **rapid population growth**, fuelled by **high levels of fertility** (births per woman).
- Over the decades, India has been able to **arrest the pace** of population growth which has been **led by several Southern states**.
  - **Andhra Pradesh** achieved the Replacement Level of Fertility in **2004**, making it the **5th Indian state** to do so after **Kerala (1988), Tamil Nadu (2000), Himachal Pradesh (2002), and West Bengal (2003)**.
- **Andhra Pradesh** used to have a law that **barred people from contesting in local polls** if they had more than two children. The law was later repealed.
- Despite lower fertility levels in individual states, India is the **most populous country** in the world.

## How do Countries Respond to Ageing Population?

- **China's Three-Child Policy:** In **2016**, China moved to allow its citizens to have **two children** and in **2021**, China announced that families are permitted to have **three children**.
  - From **1980 to 2016**, China imposed a **one-child policy**, which slowed population growth.
- **Japan's Parental Leave:** It includes mandating **twelve-month parental leave**, offering direct financial aid to parents, and investing heavily in **subsidised childcare**.
- **Extended Retirement Age:** Some countries, such as **France and the Netherlands**, extended the retirement age or the age at which people are eligible for **pension benefits** to alleviate pressure on **pension systems**.
- **Open Immigration Policy:** **Australia, Canada**, and other countries have adopted more **open immigration policies** to counter labour shortages due to their declining populations.

## What can be done to Arrest Ageing and Shrinking Population?

- **Pro-Natalist Policies:** Scandinavian countries have demonstrated that **family support, childcare, gender equality**, and parental leave policies can help maintain fertility rates.
  - Proper **government funding of child healthcare and education** can motivate people to have **more children**.
- **Leveraging Internal Migration:** **Internal migration** between the more **populous Northern states and the more developed Southern states** can bring in working-age individuals, mitigating the impact of an ageing population.
  - States receiving migrants would benefit from an **immediate influx** of labour **without** the need to invest in **education and upbringing** for young families.
- **Promoting Gender Equality:** Gender equality initiatives promoting **shared parenting responsibilities** can potentially lead to increased fertility rates.

**Drishti Mains Question:**

Discuss the causes of shrinking populations in certain states of India. What are the potential socio-economic implications of this demographic shift?

## UPSC Civil Services Examination Previous Year's Question (PYQs)

### Mains

- Q.** Discuss the main objectives of Population Education and point out the measures to achieve them in India in detail. **(2021)**
- Q.** "Empowering women is the key to control the population growth." Discuss. **(2019)**
- Q.** Critically examine whether the growing population is the cause of poverty or poverty is the main cause of population increase in India. **(2015)**

## Global Hunger Index 2024

**For Prelims:** [Global Hunger Index](#), Child Stunting, Undernourishment, [National Food Security Act](#), [Poshan Abhiyan \(National Nutrition Mission\)](#), [PM Garib Kalyan Yojana \(PMGKAY\)](#), [National Mission for Natural Farming](#)

**For Mains:** Issues Related to Poverty & Hunger in India, Role of reliable data in formulating effective public health strategies, Food security, Government initiatives, and the socio-economic factors contributing to hunger.

**Source:** [TH](#)

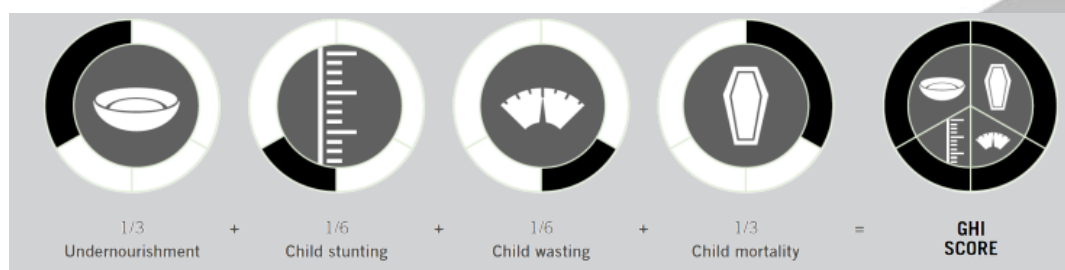
### Why in News?

Recently, India ranks **105<sup>th</sup> out of 127** countries in the [Global Hunger Index \(GHI\) 2024](#) with a score of **27.3**, highlighting a **"serious" hunger crisis** driven by ongoing challenges of food insecurity and malnutrition.



## What is GHI?

- The Global Hunger Index (GHI) is a **peer-reviewed report**, published on an annual basis by Concern Worldwide and Welthungerhilfe.
- The GHI is a tool designed to comprehensively measure and track hunger at global, regional, and national levels, reflecting multiple dimensions of hunger over time.
- The **GHI score is calculated on a 100-point scale** reflecting the severity of hunger - **0 is the best score (implies no hunger) and 100 is the worst.**
- **Four Component Indicators:**
  - **Undernourishment:** The share of the population whose caloric intake is insufficient; It refers to Insufficient calorie intake to sustain a healthy life, as defined by the Food and Agriculture Organization of the United Nations.
  - **Child Stunting:** The share of children under the age of five who have **low height for their age**, reflecting chronic undernutrition;
  - **Child Wasting:** The share of children under the age of five who have **low weight for their height**, reflecting acute undernutrition; and
  - **Child Mortality:** The share of children who die before their fifth birthday, reflecting in part the fatal mix of inadequate nutrition and unhealthy environments.



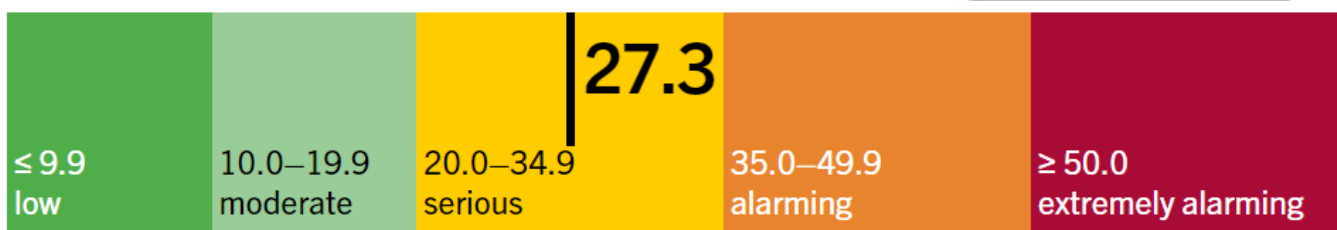
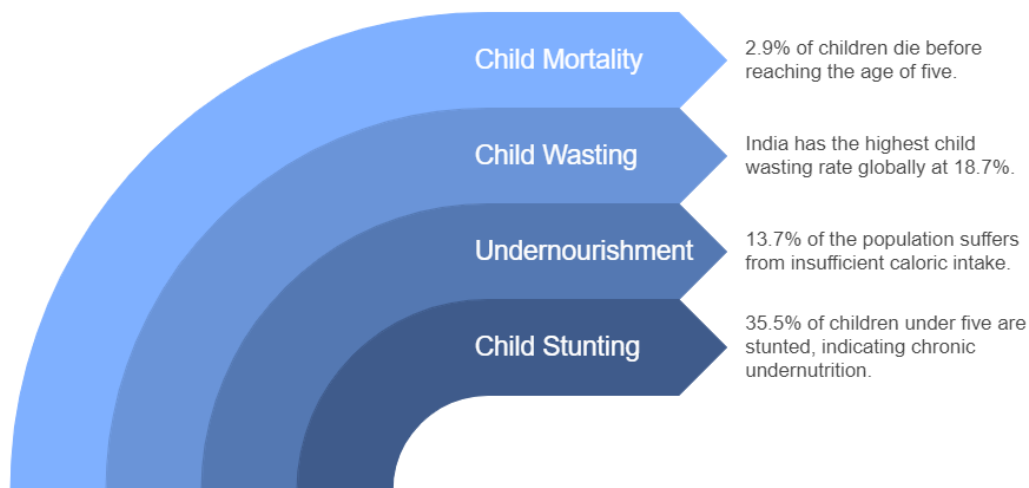
## Note:

- **Concern Worldwide** is an international humanitarian organization focused on addressing poverty and alleviating suffering in the world's poorest countries.
- **Welthungerhilfe**, founded in **1962 as the German branch** of the "**Freedom from Hunger Campaign**," is a private aid organization based in Germany.

## What are the Key Findings of the Report?

- **India-Specific Findings:** GHI Score (2024) - 27.3 ('serious') slightly improved from GHI Score (2023) - 28.7 ('serious').
  - Undernourished children - 13.7%
  - Stunted children - 35.5%
  - Wasted children - 18.7% (**highest globally**)
  - Child mortality rate - 2.9%

## India's Global Hunger Index Breakdown



- **Global Trends in GHI 2024:**
  - The 2024 GHI score for the world is **18.3**, a slight improvement from **18.8** in **2016**, and is considered "moderate."
  - South Asian neighbours like Bangladesh, Nepal, and Sri Lanka perform better, ranking in the "**moderate**" category.
- **Recognizing India's Efforts:** The report acknowledges India's significant efforts to improve the food and nutrition landscape through various initiatives such as [Poshan Abhiyan \(National Nutrition Mission\)](#), [PM Garib Kalyan Yojana \(PMGKAY\)](#), [National Mission for Natural Farming](#).
- **Insufficient GDP Growth:** The report highlights that **Gross Domestic Product (GDP)** growth does not guarantee reduced hunger or improved nutrition, urging the need for policies focused on pro-poor development and addressing social and economic inequalities.

### What is India's Response to GHI 2024?

- **Faulty Methodology:** The [Ministry of Women and Child Development](#) criticized the absence of data from their [Poshan Tracker](#), which reportedly indicates a much lower child wasting rate of 7.2%.
- **Focus on Child Health:** The government noted that **three out of the four GHI** indicators pertain to children's health and may not provide a complete representation of the entire population.
- **Small Sample Size:** The government expressed doubts about the accuracy of the "**Proportion of Undernourished Population**" indicator, as it is based on a small sample size opinion poll.

### What are the Indian Government Initiatives to Address Hunger?

- [Eat Right India Movement](#)
- [POSHAN Abhiyan\(National Nutrition Mission\)](#)
- [Mid-day Meal \(MDM\) scheme](#)
- [Pradhan Mantri Matru Vandana Yojana](#)
- [National Food Security Act, 2013](#)

- [Mission Indradhanush](#)
- [Integrated Child Development Services \(ICDS\) Scheme](#)

## What are the Challenges Related to Hunger in India?

- **Inefficient Public Distribution System (PDS):** Despite improvements, India's PDS still faces challenges in reaching all intended beneficiaries.
  - The **National Food Security Act** covers 67% of the population, but more than 90 million eligible people have been excluded from legal entitlements under the [Targeted Public Distribution System \(TPDS\)](#).
- **Income Inequality and Poverty:** While India has made strides in poverty reduction (24.82 crore Indians escape **Multidimensional Poverty** in the last 9 years), significant income disparities persist, affecting food access.
- **Nutritional Challenges and Dietary Diversity:** Food security in India often focuses on calorie sufficiency rather than nutritional adequacy.
- **Urbanization and Changing Food Systems:** Rapid urbanization in India is transforming food systems and consumption patterns.
  - A 2022 study by the Tata-Cornell Institute found that 51% of urban slum households in Delhi experienced food insecurity.
- **Gender-Based Nutritional Gap:** Gender-based disparities worsen hunger and malnutrition in India. Women and girls often face unequal access to food within households, receiving smaller portions or lower-quality meals.
  - This inequity, combined with the demands of maternal and child care, increases their vulnerability to chronic undernutrition.

## Way Forward

- **PDS Enhancement:** Revamp the Public Distribution System (PDS) to enhance transparency, reliability, and affordability of nutritious food, benefiting the economically disadvantaged.
- **Social Audit and Awareness:** Implement social audits of the mid-day meal scheme in all districts with local authority involvement, enhance program monitoring through IT, and establish community-driven nutrition education programs in local languages, focusing on balanced diets for women and children.
- **Complementing With SDGs:** The **Sustainable Development Goals (SDG)**, particularly **SDG 12 (Responsible Consumption and Production)** and **SDG 2 (Zero Hunger)**, focuses on sustainable consumption pattern.
- **Investment in Agriculture:** A holistic food systems approach promoting diversified and nutritious food production, including [nutri-cereals](#) like [millets](#).
  - Addressing food wastage is critical. One key approach is improving warehousing and cold storage infrastructure to reduce post-harvest losses.
- **Health Investments:** Focus on maternal and child health through better water, sanitation, and hygiene practices.
- **Interlinking Factors:** In policy-making, it is crucial to recognize the interconnection between gender, climate change, and nutrition, as these factors significantly impact public health, social equity, and sustainable development.

### **Drishti Mains Question**

Critically analyze India's 2024 Global Hunger Index ranking and its implications for food security and nutrition. Evaluate the effectiveness of government initiatives like the National Food Security Act and suggest strategies for improvement.

## Prelims

**Q. Which of the following is/are the indicator/indicators used by IFPRI to compute the Global Hunger Index Report? (2016)**

1. Undernourishment
2. Child stunting
3. Child mortality

**Select the correct answer using the code given below:**

- (a) 1 only  
(b) 2 and 3 only  
(c) 1, 2 and 3  
(d) 1 and 3 only

**Ans: (c)**

## Mains

**Q:** Food Security Bill is expected to eliminate hunger and malnutrition in India. Critically discuss various apprehensions in its effective implementation along with the concerns it has generated in WTO. **(2013)**

---

## **Ban on Child Betrothals**

**For Prelims:** [Supreme Court](#), [Juvenile Justice Act](#), [Prohibition of Child Marriage Act \(PCMA\) of 2006](#), [United Nations](#), [UN General Assembly](#), [Protection of Children from Sexual Offences \(POCSO\) Act 2012](#), [‘Open Defecation Free Village’ initiative](#), [National Family Health Survey \(NFHS-5\)](#).

**For Mains:** Impacts and shortcomings of Prohibition of Child Marriage Act (PCMA) 2006, Issue of Child Marriage in India.

[Source: IE](#)

## **Why in News?**

[The Supreme Court](#) highlighted that marriages arranged during a **child's minority infringe upon their "free choice" and "childhood,"** and urged the Parliament to outlaw child betrothals.

- According to the court, India had yet to fully address the issue of minor betrothals, despite the **Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)** recognizing the problem in 1977.
- The [Prohibition of Child Marriage Act \(PCMA\) of 2006](#) criminalised **child marriage** but the practice of betrothal is not **explicitly prohibited under the Act.**

## The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)

- It is an **international treaty** that **aims to achieve gender equality** and protect women's rights.
- It is **considered an international bill of rights for women** and is one of the core human rights treaties of the [United Nations](#).
- CEDAW was adopted by the [UN General Assembly](#) in 1979 and came into effect in 1981 after 20 countries ratified it.
- **India signed CEDAW in 1980 and ratified it in 1993.**

## What is the Status of Child Marriage in India?

- **History:**
  - Historical texts suggest that early marriages were prevalent, particularly for girls, often for socio-economic reasons or to ensure family alliances.
  - During the medieval era, the practice became more entrenched due to the **influence of certain religious and cultural norms**. The age of marriage for girls decreased significantly, with marriages often **arranged soon after puberty**.
  - The British colonial government, **influenced by socio-religious reformers like [Raja Ram Mohan Roy](#) and [Ishwar Chandra Vidyasagar](#)**, recognized the harm of child marriage and began addressing the issue.
    - The British government introduced legislative measures to curb the practice, notably the **Age of Consent Act of 1891**, which raised the age of consent for marriage to 12 years.
    - The **Child Marriage Restraint Act (1929)**, also known as **the Sarda Act**, set the minimum age for marriage at 14 for girls and 18 for boys, marking the first legal intervention to control child marriages.
- **Status of Child Marriage in India:**
  - Girl child marriages declined from **49% in 1993 to 22% in 2021**. Boy child marriages reduced from **7% in 2006 to 2% in 2021**, indicating an overall national decline.
  - However, between **2016 and 2021**, the progress plateaued, with certain states experiencing a troubling rise in child marriages.
    - Notably, six states witnessed an **increase in girl-child marriages**, including **Manipur, Punjab, Tripura, and West Bengal**.
    - Eight states observed a rise in boy-child marriages, encompassing **Chhattisgarh, Goa, Manipur, and Punjab**.
- **Legal Measures to Prevent Child Marriage:**
  - [Prohibition of Child Marriage Act \(PCMA\) in 2006](#).
  - In the case of ***Independent Thought v. Union of India, 2017***, the Supreme Court of India held that **sexual intercourse between a man and his wife**, if she is aged between 15 and 18 years, **constitutes rape**.
    - The above judgement **narrowed the scope of exception 2 to Section 375** of the [Indian Penal Code \(BNS\)](#) and raised the age of consent to 18 years for marital sexual intercourse.
- **Government Initiatives:**
  - [Beti Bachao Beti Padhao scheme](#)
  - [Dhanalakshmi Scheme](#): It is a conditional cash transfer scheme for a girl child with insurance coverage.
    - It also aims to **eliminate child marriage by offering parents insurance coverage** of medical expenses and encouraging the education of the girl child.

## What is the Prohibition of Child Marriage Act (PCMA) 2006?

- **Objective:** The Act **prohibits the solemnisation of child marriages** and aims to protect children from being married before the legal age.

- **Legal Age for Marriage:** Under the Act, the **legal age for marriage** is set at **18 for women and 21 for men.**
- **Voidable Marriages:** Marriages involving minors can be declared voidable at the option of either party, and they may seek **annulment within two years** of attaining adulthood.
- **Punishments:** The **Act prescribes penalties**, including **imprisonment and fines**, for those who solemnise, conduct, or abet child marriages, as well as for parents or guardians involved.
- **Child Marriage Prohibition Officers:** The Act empowers states to appoint **Child Marriage Prohibition Officers** to prevent child marriages and ensure the law is enforced.
- **Protection and Maintenance:** It provides for the protection of minors involved in such marriages, including the **right to maintenance for the child bride until her remarriage.**
- **Applicability:** The Act **overrides any customs, laws**, or personal religious laws that allow for child marriages, ensuring universal protection across India.

## What did the Court Judgement say?

- **Equal Right to Childhood:** The court pointed out that **patriarchal ideas of masculinity and sexual dominance**, along with misinformation from peers, **often lead young boys to commit violence** against their child brides.
  - While girls are disproportionately affected, the judgement emphasised that the **right to childhood belongs to all sexes.**
  - The court **declared a child** whose marriage was fixed as “**a minor** in need of care and protection” under [the Juvenile Justice Act](#).
- **Child Marriage Threatening Modern Laws:** The Court noted that the centuries-old practice of child marriage undermines modern laws like the [POCSO Act, 2012](#), as it exposes **minor girls to sexual abuse** despite legal protections.
- **Objectification in Child Marriages:** The Court held that child marriages **objectify children and impose adult responsibilities**, including expectations of compulsory heterosexuality and fertility.
- **Disruption of Natural Sexuality:** The Court noted that child marriage systematically **dismantles a person’s ability to organically experience sexual desire and navigate intimacy**, all under the guise of tradition.

## What are the Guidelines Issued By the Court?

- **Guidelines for Sexuality Education:** The Court directed the government to implement age-appropriate and **culturally sensitive sexuality education** for children in schools.
- **Child Marriage Free Village Initiative:** It proposed a **drive to create ‘Child Marriage Free Villages,’** akin to the [‘Open Defecation Free Village’ initiative](#), engaging local and community leaders in the effort.
- **Online Reporting Portal:** The court recommended the Home Ministry to establish a designated **portal for the online reporting of child marriages.**
- **Compensation Scheme:** The Court urged the Ministry of Women and Child Development to initiate a **compensation scheme for girls who choose to exit child marriages.**
- **Annual Budget Allocation:** It also called for the **allocation of an annual budget dedicated to preventing child marriages** and providing support to affected individuals.

## Protection of Children from Sexual Offences Act (POCSO) 2012

- **Purpose:**
  - The POCSO Act **aims to protect children from sexual assault, sexual harassment, and pornography.** It also aims to punish offenders based on the severity of the crime.
- **Features:**
  - It is **gender neutral** as it applies to both boys and girls. It also includes provisions for special courts to try cases, compensation for victims, and medical examinations in the presence of a trusted adult.
- **Amendments:**
  - It was **amended in 2019** to introduce more **stringent punishments**, including the death penalty.

- **Reporting:**
  - The **Union Ministry of Women and Child Development** launched the **POCSO e-box** to facilitate reporting of sexual offenses against children.
- **Compensation:**
  - **Victims** may receive **interim compensation for immediate needs**, and final compensation for any loss or injury. Compensation is given regardless of whether the accused is found guilty.

## What are the Challenges to Implement PCMA?

- **Cultural Norms and Societal Attitudes:** Deep-rooted **cultural beliefs and practices continue to support child marriage** in many communities, making it difficult to change attitudes.
  - Certain cultural and religious laws, such as **Muslim personal law and tribal customs in the Northeast, permit child marriage**, making the Prohibition of Child Marriage Act (PCMA) inapplicable in these cases.
  - According to the [National Family Health Survey \(NFHS-5\)](#) 2019-21, nearly **23% of women aged 20-24 were married before the age of 18**, indicating persistent acceptance of the practice.
- **Inadequate Enforcement of Laws:** Despite the existence of the PCMA 2006 enforcement remains weak. **Local authorities may lack the resources or commitment to take action** against child marriages, resulting in low conviction rates.
- **Gender Inequality: Gender-based discrimination** perpetuates child marriage, as **girls are often viewed as economic burdens**.
- **Influence of Peer Pressure: Misinformation and peer pressure** among children can lead to acceptance of child marriage. Community engagement and peer education programs are necessary to counter these influences.
- **Lack of Awareness and Education:** Many communities **lack awareness of the legal provisions against child marriage** and its negative impacts.
  - Educational campaigns are needed to inform families about the **benefits of delaying marriage and the rights of children**.

## Way Forward

- **Strengthen Legal Framework and Enforcement:** Enhance the enforcement of the Prohibition of Child Marriage Act by **increasing the accountability of local authorities and law enforcement**.
  - Establish specialised training programs for officials to effectively address and prevent child marriages.
- **Expand Educational and Economic Opportunities for Girls:** Invest in initiatives that **promote girls' education** and provide scholarships or financial support to families to keep girls in school. Eg. **Nijut Moina Scheme of Assam** to provide **monthly financial aid to girl students from higher secondary to postgraduate levels** in government and aided institutions.
  - Develop **vocational training programs to empower girls economically**, making early marriage less appealing.
- **Strengthen Support Systems and Health Services:** Establish **support networks for girls at risk of child marriage**, including counseling and healthcare services.
  - Provide **training for healthcare providers to address the unique needs of girl child** and ensure access to reproductive health services.
- **Implement Comprehensive Awareness Campaigns:** Launch **nationwide awareness campaigns** focusing on the negative impacts of child marriage and the **benefits of education for girls**.
  - Engage community leaders, parents, and youth to promote cultural shifts and encourage the abandonment of harmful practices.

**Drishti Mains Question:**

Q. Discuss the implications of child marriage on the rights of children in India. Analyze the effectiveness of the Prohibition of Child Marriage Act, 2006.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Prelims:

Q. With reference to the United Nations Convention on the Rights of the Child, consider the following: (2010)

1. The Right to Development
2. The Right to Expression
3. The Right to Recreation

Which of the above is/are the Rights of the child?

- (a) 1 only  
(b) 1 and 3 only  
(c) 2 and 3 only  
(d) 1, 2 and 3

Ans: (d)

### Mains:

Q. "Empowering women is the key to control the population growth." Discuss. (2019)

## Volcanic Eruption and Ionospheric Disturbances

[Source: PIB](#)

### Why in News?

Recently, a new study revealed a **connection** between the [Tonga volcano eruption](#) and the formation of [Equatorial Plasma Bubbles \(EPBs\)](#) over the Indian subcontinent.

- Tonga volcano is a [submarine volcano](#) in the South Pacific Ocean.

### What are the Key Highlights of the Study?

- **Volcanic Eruption and Space Weather:** The Tonga eruption triggered **ionospheric disturbances**, contributing to space weather events that affect **satellite signals**.
- **Atmospheric Gravity Waves:** The eruption produced strong [atmospheric gravity waves](#) that propagated into the upper atmosphere triggering favourable ionospheric conditions for the formation of EPBs.
  - Atmospheric gravity waves form when **buoyancy pushes air upward, and gravity pulls it back down**.



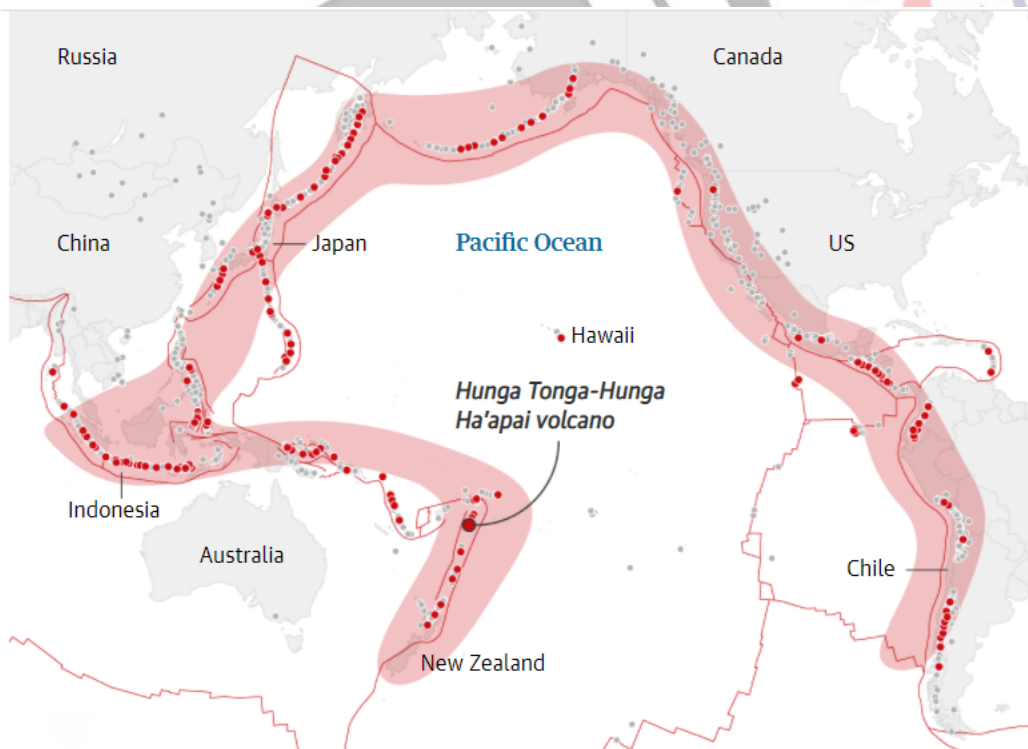
- **Plasma Instabilities: Plasma blobs**, an increase in the ionospheric eastward **electric field at dusk** were detected, indicating further ionospheric disturbances due to the eruption.

## What are Key Points about Equatorial Plasma Bubbles (EPBs)?

- **About EPBs:** EPBs are ionospheric phenomena that are generated through **plasma instabilities**, particularly in the equatorial **ionosphere**.
  - EPBs are regions of **depleted plasma** in the ionosphere that form near the **magnetic equator** during post-sunset hours.
  - EPBs originate in the equatorial ionosphere but can **extend**, affecting the global ionosphere **15° North and South of the Earth's equator**.
- **Impact on Radio Wave Propagation:** As radio waves propagate through the ionosphere, irregularities associated with EPBs can **scatter them, leading to signal degradation**.
  - It is a major concern for communication systems that rely on **high-frequency radio waves**, such as satellite communications and GPS.
- **Seasonal and Regional Variability:** EPBs are most frequent during the **Winter solstice (21<sup>st</sup> or 22<sup>nd</sup> December)** and **least frequent during the Summer solstice (21<sup>st</sup> June)**.

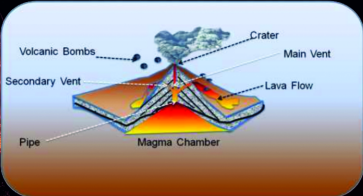
## What are Key Facts About the Tonga Volcano?

- **Location:** It is located in the **western South Pacific Ocean**, west of the main inhabited islands in the Kingdom of **Tonga**.
- **Geology:** It is one of 12 confirmed submarine volcanoes along the **Tofua Arc**, a segment of the larger **Tonga-Kermadec volcanic arc**.
  - The **Tonga-Kermadec arc** formed as a result of subduction of the **Pacific Plate beneath the Indo-Australian Plate**.
  - It is a part of the **Ring of Fire**.
- **Submarine Volcano:** It is an **undersea volcano** consisting of two small uninhabited islands, **Hunga-Ha'apai and Hunga-Tonga**.




# VOLCANOES

A volcano is a vent or a fissure in the crust from which lava (molten rock), ash, gases, rock fragments erupt from a magma chamber below the surface



- **Types: On basis of-**
  - **Periodicity of Eruption:**
    - Active volcano: Recently Erupted
    - Dormant Volcano: Potential for eruption, no imminent signs
    - Extinct: No recent eruptions, low possibility in future
  - **Nature of Eruption:**
    - Hawaiian: Calmest types (low gaseous content)
    - Strombolian: Formation of large gas bubbles in magma
    - Vulcanian: More explosive
    - Plinian eruptions: Magma's volatile gases rise via a narrow conduit
    - Icelandic: Often build lava plateaus
  - **Shape of Volcanoes:**
    - Shield volcanoes: Composed of basaltic lava, low slope
    - Cone volcanoes (Cinder Cones): Most abundant
    - Composite cones (stratovolcanoes): Formed by layers of diverse materials.
- **Volcanic Features:**
  - **Extrusive :**
    - Crater: Cone-shaped vent for magma
    - Caldera: Large, crater-like depression
    - Volcanic Plateaus: Leveled areas from fissure eruptions
  - **Intrusive:**
    - Batholiths: Central core of a volcanic mountain.
    - Dyke: Vertical intrusion cutting across country rock bedding.
    - Sills: Tabular intrusions along sedimentary bedding.
    - Laccoliths: Magma injection along horizontal sedimentary bedding.
  - **Minor:**
    - Geysers: Underground water above 100°C, powered by magma, results in powerful eruptions with steam and diluted minerals.
    - Hot Springs: Heated water flows quietly along fault zones.
- **Distribution of Volcanoes:**
  - Subduction zones (Circum Pacific Belt)
  - Divergence zones (Mid Atlantic Ridge)
  - Intra-plate oceanic volcanism (Hawaiian chain)
  - Mid-continental belt and volcanoes in Mediterranean region
- **Volcanoes in India:**
  - No volcanoes in Himalayas
  - Barren Island (Only active volcano)
- **Products of Volcanic Eruption:**
  - **Gases:** H, C, O, S, N, CH<sub>4</sub>, NH<sub>3</sub>
  - **Solid:** Pyroclastic materials
  - **Liquid:** Lava

 Drishti IAS

## Ionosphere

- It is **not a distinct layer** like the Troposphere or Stratosphere. Instead, the ionosphere **overlaps** the **mesosphere, thermosphere, and exosphere**.
- It's a very **active part** of the atmosphere, and it **grows and shrinks** depending on the energy it absorbs from the sun.
  - It is an **electrically conducting region** capable of **reflecting radio signals** back to Earth.
- The **electrically charged atoms and molecules** that are formed in this way are called **ions**, giving the ionosphere its name.

Read More: [Tonga Volcano Impacting Weather](#)

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Prelims

Q.Consider the following statements: (2018)

1. The Barren Island volcano is an active volcano located in the Indian territory.
2. Barren Island lies about 140 km east of Great Nicobar.
3. The last time the Barren Island volcano erupted was in 1991 and it has remained inactive since then.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3
- (c) 3 only
- (d) 1 and 3

**Ans: (a)**

**Q.Consider the following: (2013)**

1. Electromagnetic radiation
2. Geothermal energy
3. Gravitational force
4. Plate movements
5. Rotation of the earth
6. Revolution of the earth

**Which of the above are responsible for bringing dynamic changes on the surface of the earth?**

**(a)** 1, 2, 3 and 4 only

**(b)** 1, 3, 5 and 6 only

**(c)** 2, 4, 5 and 6 only

**(d)** 1, 2, 3, 4, 5 and 6

**Ans: (d)**

## **Bishnoi, Blackbuck and Chinkara**

**Source: DTE**

### **Why in News?**

Recently, bollywood actor Salman Khan faced backlash from the Bishnoi community for allegedly hunting **blackbucks** (*Antelope cervicapra*) in 1998.

### **What are the Key facts about the Bishnoi community?**

#### **▪ About:**

- The Bishnoi, a **primarily Hindu sect** (historically the British classified them as Muslim), mainly reside in **western Rajasthan's Thar Desert**.
- The **Bishnoi community, founded on 29 principles by Guru Jambheshwarji**, who was born in 1451 CE, protects wildlife, especially blackbucks and chinkaras.
  - Eight of these principles emphasise compassion towards living beings and protecting biodiversity.
  - In addition to their 29 principles, **Guru Jambhoji wrote a set of 120 statements or shabdhas**.
- The Bishnoi's eco-conscious beliefs stem from their historical sacrifices for nature, including the **Khejarli massacre in 1730**.
  - In the 1730 Khejarli massacre, 363 Bishnoi along with **Amrita Devi** sacrificed their lives protecting Khejri trees from **Maharaja Abhay Singh's (Maharaja of Jodhpur) soldiers**. The community has also defended Thar's wildlife from hunters and poachers.

#### **▪ Conservation Efforts:**

- **Wildlife** is concentrated around Bishnoi villages in Rajasthan's desert region, where the community actively protects flora and fauna.

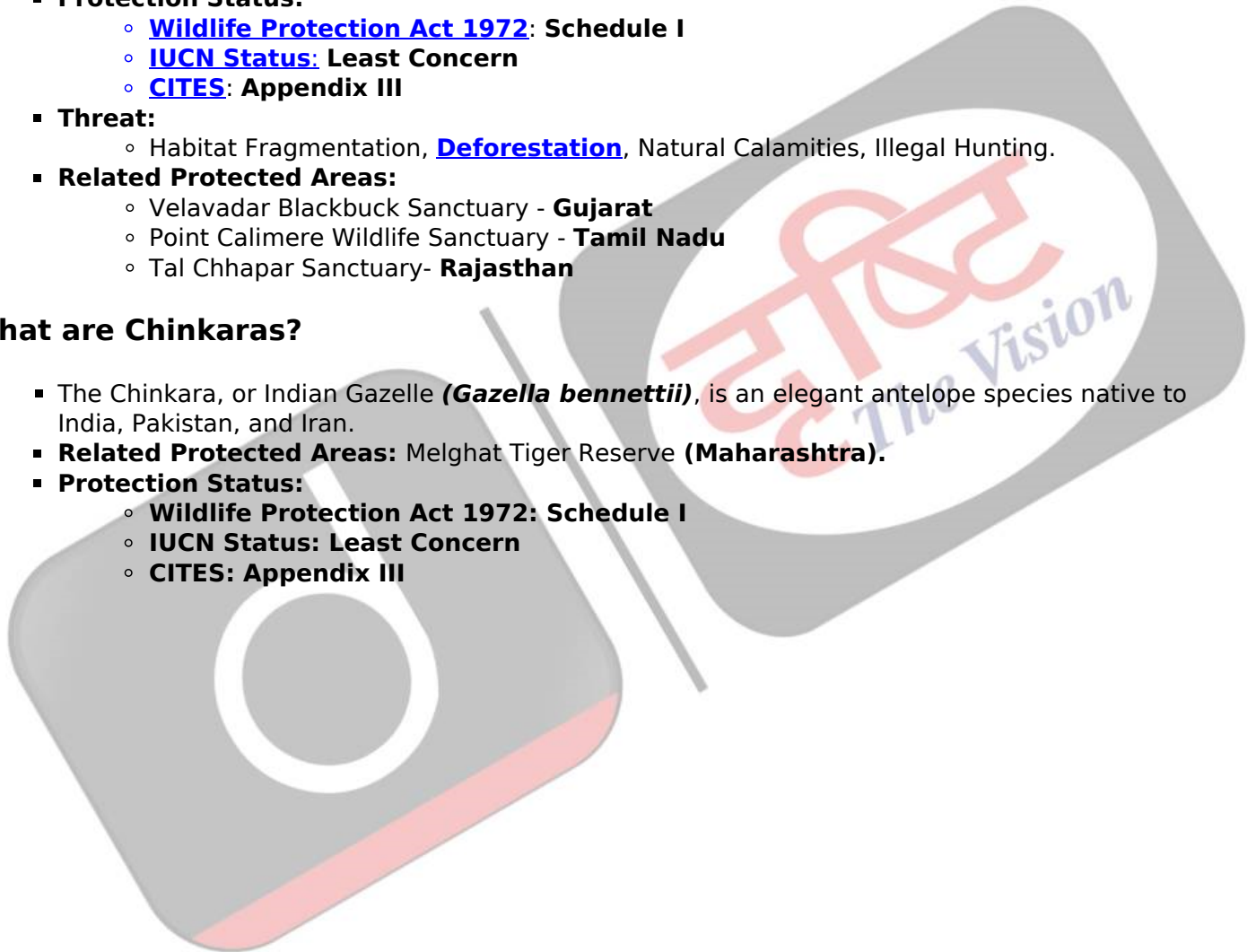
- The Bishnoi give special protection to **Blackbuck**, **Chinkara**, **Great Indian Bustard**, and the **Khejri tree**.

## What are Blackbucks?

- **About:**
  - The **Blackbuck (*Antelope cervicapra*)**, or the Indian Antelope, is a species of antelope native to India and Nepal.
  - It is widespread in **Rajasthan, Gujarat, Madhya Pradesh, Tamil Nadu, Odisha**, and other areas throughout peninsular India.
  - It is considered as the epitome of grassland.
  - The blackbuck is a diurnal antelope (active mainly during the day).
- **Recognition:** It has been declared as the State Animal of Punjab, Haryana, and Andhra Pradesh.
- **Cultural Importance:** It is a symbol of purity for Hinduism as its skin and horns are regarded as sacred objects. For Buddhism, it is a symbol of good luck.
- **Protection Status:**
  - **Wildlife Protection Act 1972: Schedule I**
  - **IUCN Status: Least Concern**
  - **CITES: Appendix III**
- **Threat:**
  - Habitat Fragmentation, **Deforestation**, Natural Calamities, Illegal Hunting.
- **Related Protected Areas:**
  - Velavadar Blackbuck Sanctuary - **Gujarat**
  - Point Calimere Wildlife Sanctuary - **Tamil Nadu**
  - Tal Chhapar Sanctuary- **Rajasthan**

## What are Chinkaras?

- The Chinkara, or Indian Gazelle (***Gazella bennettii***), is an elegant antelope species native to India, Pakistan, and Iran.
- **Related Protected Areas:** Melghat Tiger Reserve (**Maharashtra**).
- **Protection Status:**
  - **Wildlife Protection Act 1972: Schedule I**
  - **IUCN Status: Least Concern**
  - **CITES: Appendix III**



# WILDLIFE CONSERVATION INITIATIVES

## Constitutional Provisions for Wildlife

### 42nd Amendment

**Act, 1976:** Forests & Protection of Wild Animals and Birds (moved from State to Concurrent List)

### Article

**48 A:** State shall endeavor to protect & improve environment and safeguard forests and wildlife of country

### Article

**51 A (g):** Fundamental duty to protect & improve natural environment including forests and Wildlife

## Legal Frameworks

Wildlife (Protection) Act, 1972

Biological Diversity Act, 2002

## Major Conservation Initiatives

### Integrated Development of Wildlife Habitats (IDWH):

- ↳ Financial assistance provided to State/UT Governments for protection and conservation of wildlife
- ↳ A Centrally Sponsored Scheme

### National Wildlife Action Plan (2017-2031)

### Guidelines for Eco-tourism in Protected Areas

### Human-Wildlife Conflict Mitigation

**Wildlife Crime Control Bureau:** To combat wildlife-related crimes

### Wildlife Division (MoEFCC):

- ↳ Policy and law for conservation of biodiversity and Protected Area network
- ↳ Technical and financial support to the State/ UTs under IDHW, Central Zoo Authority and Wildlife Institute of India

### Wildlife Crime Control Bureau (WCCB):

Collection, collation of intelligence & its dissemination, establishment of centralized Wild Life crime databank, coordination etc.

### Wildlife Crime Control:

- ↳ Operation Save Kurma
- ↳ Operation Thunderbird

## Species-Specific Initiatives

- Protection and conservation of Greater Adjutant in Gangetic riverine tract
- Dolphin Conservation in Non-Protected Area Segment of Ganga River
- Conservation Breeding Centre for Wild water buffalo (2020)
- Recovery programme for Snow leopard (2009)
- Recovery programme for Vultures (2006)
- Project Elephant (1992)
- Project Tiger/National Tiger Conservation Authority (NTCA) (1973)

## India's Collaboration with Global Wildlife Conservation Efforts

- ↳ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- ↳ Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- ↳ Convention on Biological Diversity (CBD)
- ↳ World Heritage Convention
- ↳ Ramsar Convention
- ↳ The Wildlife Trade Monitoring Network (TRAFFIC)
- ↳ United Nations Forum on Forests (UNFF)
- ↳ International Whaling Commission (IWC)
- ↳ International Union for Conservation of Nature (IUCN)
- ↳ Global Tiger Forum (GTF)



Drishti IAS

UPSC Civil Services Examination, Previous Year Questions (PYQs)

**Prelims:**

**Q1. Which one of the following protected areas is well-known for the conservation of a sub-species of the Indian swamp deer (Barasingha) that thrives well on hard ground and is exclusively graminivorous? (2020)**

- (a) Kanha National Park
- (b) Manas National Park
- (c) Mudumalai Wildlife Sanctuary
- (d) Tal Chhapar Wildlife Sanctuary

**Ans: (a)**

---

## 4th Nuclear-Powered Ballistic Missile Submarine

**Source: HT**

Recently, India launched its **4th nuclear-powered ballistic missile submarine** at the Ship Building Center (SBC) in Visakhapatnam.

- It has about **75% indigenous content** and is equipped with **Kalam-4 nuclear ballistic missiles** with a range of **3,500 km**, launched via **vertical systems**.
- The other three nuclear-powered ballistic missile submarines are **INS Arihant, INS Arighaat and INS Aridhaman**.
  - A nuclear-powered attack submarine of the **Russian Akula class** is set to join the force on lease in 2028.
  - **INS Chakra**, an Akula class vessel, was taken on lease from **Russia in 2012**.
- The government plans the construction of **three more advanced diesel attack submarines** at Mazagon Dockyards in collaboration with the **French Naval Group**.
- A nuclear submarine uses a **nuclear reactor for propulsion**, providing **unlimited range and endurance**. It is limited only by food supplies, crew fatigue, and maintenance.

**Read More: [India's Submarine Strength](#)**

---

## International Workshop on Urban Land Records

**Source: PIB**

Recently, the **Ministry of Rural Development** organised the International Workshop on the use of "**Modern Technologies in Survey-Resurvey for Urban Land Records**".

- It reaffirmed the commitment of **digitising land records** under the **Digital India Land Records Modernization Programme (DILRMP)**.
- A pilot program named **National Geospatial Knowledge-based Land Survey of Urban Habitations (NAKSHA)** was introduced to create urban land records in **over 100 cities/towns**.
- **Use of drones and aerial photography** with 3D imagery in land record creation was

highlighted.

- **DILRMP** (erstwhile [National Land Record Modernization Programme](#)) is a **Central Sector Scheme** with effect from **1st April 2016** with **100% funding by the Centre**.
  - It aims to develop a **modern, comprehensive and transparent** land record management system.
  - **Innovative Initiatives under DILRMP:**
    - [Unique Land Parcel Identification Number \(ULPIN\)](#) or **Bhu-Aadhar** (**14 digit Alpha-numeric unique ID** for each land parcel based on Geo-coordinates)
    - **National Generic Document Registration System (NGDRS) or E-Registration** (to have a **uniform process for registration** for deeds/documents).

Read More: [Digitisation of Land Records](#)

---

## 28 Naxalites Killed by Security Forces in Chhattisgarh

Source: TH

Recently, 28 [Maoists](#) were killed by security forces in a gunfight in **Chhattisgarh's Bastar region**.

- **Origin:**
  - The movement originated as a rebellion against local landlords who assaulted peasants over a land dispute and is now popularly known as Maoists and referred to as [Naxalites](#) in India.
- **Objective:**
  - They seek to overthrow the government through **armed revolution** to **establish** a communist state **based on Maoist principles**, viewing the state as oppressive and addressing socio-economic grievances through armed struggle.
- **Affected states:**
  - The [Red Corridor](#) is the region in the central, eastern and southern parts of India that experience severe **Naxalism-Maoist insurgency**.
  - The States of **Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh and Kerala** are considered Left Wing Extremism(LWE) affected.
- **Government Scheme:**
  - **The Niyad Nellanar Scheme:** It offers amenities and benefits to villages within 5 kilometers of security camps in Bastar.
  - **Security Related Expenditure (SRE) scheme:** Covers security costs like training and ex-gratia to LWE-affected states.

# LEFT WING EXTREMISM

## ABOUT

- 📍 **Originated:** 1967 uprising in Naxalbari, West Bengal
- 📍 **Aim:** Societal and political change through revolutionary methods

## IDEOLOGY

- 📍 Overthrow central government through armed revolution (Violence and guerilla warfare)
- 📍 Establishment of a communist state based on Maoist principles

## FACTORS RESPONSIBLE

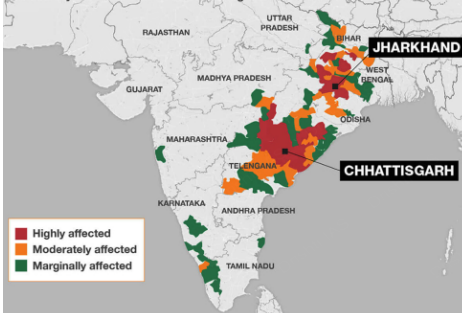
- 📍 **Massive displacement of tribal population;** Due to development projects, mining operations
- 📍 **Tribal dissatisfaction;** Forest (Conservation) Act 1980 prohibits tribes from harvesting forest resources
- 📍 **Poverty and lack of sustainable means;** Driving factors for joining Naxalite movement
- 📍 **Lack of effective governance;** Insufficient technical intelligence against Naxalism

## STATES AFFECTED BY LWE

- 📍 **Red Corridor:** Experiences severe Naxalism–Maoist insurgency
- 📍 Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh and Kerala

### A map of India's Maoist conflict

A crackdown on Maoist rebels has led to a rise in the number of casualties in the country's tribal areas. Here are the regions that are most affected.



## GOVERNMENT INITIATIVES TO CURB LWE

- 📍 National Policy and Action Plan to address Left Wing Extremism 2015
- 📍 **SAMADHAN Doctrine**
  - 📍 **S-** Smart Leadership
  - 📍 **A-** Aggressive Strategy
  - 📍 **M-** Motivation and Training
  - 📍 **A-** Actionable Intelligence
  - 📍 **D-** Dashboard Based KPIs (Key Performance Indicators) and KRAs (Key Result Areas)
  - 📍 **H-** Harnessing Technology
  - 📍 **A-** Action plan for each Theatre
  - 📍 **N-** No access to Financing
- 📍 **Special Central Assistance (SCA)** in Public Infrastructure and Services
- 📍 **Operation Green Hunt**
- 📍 **Greyhounds** (Elite commando force in Andhra Pradesh)
- 📍 **Bastariya Battalion** (local recruits in Chhattisgarh who know the language and terrain that could generate intelligence and conduct operations)

### Countering Naxalism - Bandyopadhyay Committee (2006)

- Highlighted the lack of governance, economic, socio-political and cultural discrimination against the tribals
- Recommended tribal-friendly land acquisition and rehabilitation



Drishti IAS

[Read More...](#)

## Hyperuniformity

Source: PIB

Researchers have explored the mechanism behind the **emerging property** of a recently discovered **exotic disordered state of matter**, known as “hyperuniformity”.

- **About Hyperuniformity:** It is a property of certain **heterogeneous media** where **long-wavelength density fluctuations decay to zero**.
  - Hyperuniform disordered materials are observed in [quasicrystals](#), [large-scale cosmic structures](#), [biological emulsions](#), and [colloids](#).
- **Mechanism Behind Hyperuniformity:**
  - In hyperuniform systems, suppressed **density fluctuations result from a conservation law that limits particle mobility**, explaining the reduced mass fluctuations as system



size grows.

▪ **Comparison to Critical Point of Liquids:**

- Hyperuniform matter **contrasts with liquid critical points**, where mass fluctuations diverge and cause critical opalescence.
- In hyperuniform matter, **mass fluctuations are suppressed, positioning it between a crystal, amorphous solid, and liquid.**

▪ **Potential Applications of Hyperuniform Materials:**

- Hyperuniform materials have unique properties with potential technological and biological applications, including **energy-efficient photonic devices for data transmission and controlling cellular functions.**

[Read More...](#)

---

PDF Reference URL: <https://www.drishtias.com/current-affairs-news-analysis-editorials/news-analysis/22-10-2024/print>

