

## APPROACH\_ANSWER: ABHYAAS PAPER I - 2928 (2024)

1. *How does tribal art provide valuable insights into the cultural perspectives and values of Indian tribal communities? (Answer in 150 words)* 10

**Approach:**

- Introduce by writing about tribal art in India.
- Explain with examples how the Indian tribal art provides valuable insights into the cultural perspectives and values of Indian tribal communities.
- Conclude accordingly.

**Answer:**

Tribal art encompasses various art forms, such as wall paintings, tribal dances; music, etc., which expresses a cultural identity by conveying shared community values and aesthetics of tribals.

These art forms provide valuable insights into the cultural perspectives and values of Indian tribal communities as given below:

- **Reflection of cultural heritage:** Tribal Art is an expression of the tribe's history and their way of life. The art of tribal communities in India is diverse, with each tribe having its own unique style reflecting their cultural heritage.
  - For example, the Gond paintings reflect the tribal life, their fears and aspirations rather than an icon demanding worship. They were drawn to celebrate festivals and to please the spirits for aphrodisiacal purposes.
- **Asserting cultural identity:** Tribal art serves as a powerful medium for indigenous communities to assert their values and cultural identity.
  - For example, the Dongria Kondh tribes use paintings to depict their struggle against mining companies by highlighting its devastating impact on their way of life.
- **Functional art:** Beyond just aesthetic value, many tribal art forms have practical or utilitarian purposes.
  - For example, the Saora paintings from South Orissa depict the healing process for disease, safe childbirth and other life events.
- **Depictions of folklore:** Tribal art highlights the cultural aspects of tribal life like the stories of their relationship with the nature, folklore and rituals through drawing of animals, birds and mythical creatures using fine lines, scales and dots.
  - For example, Warli art is characterized by its simple yet striking style, with images of humans, animals, and nature depicted using basic geometric shapes.

- **Reflects cultural beliefs:** The symbols used in tribal art portray the cultural beliefs and emotions of the tribal people.
  - For example, **fish are a symbol of fertility and prosperity** in many tribal arts.

The treasure of tribal arts has an astounding range, diversity and beauty. Traditional Indian tribal art tries to wholly recreate the immortal charisma of Indian tribal life. Considering its richness, it is necessary to preserve these diverse art forms.

**Highlights:**

**Art forms & cultural perspectives:**

- **Cultural heritage:** Tribal art expresses history and life, Gond paintings depict tribal life, festivals, and spirits.
- **Cultural identity:** Art asserts values and struggles, Dongria Kondh paintings highlight fight against mining.
- **Functional art:** Serves practical purposes, Saora paintings depict healing and life events.
- **Folklore depictions:** Show tribal stories and rituals, Warli art uses geometric shapes.
- **Cultural beliefs:** Symbols like fish represent fertility and prosperity.

**2. Compare and contrast the approach of Mahatma Gandhi and Jawaharlal Nehru towards the Indian freedom struggle. (Answer in 150 words)** **10**

**Approach:**

- Introduce by providing a brief background of both the leaders.
- Mention their differences in opinion and approach towards freedom struggle.
- Conclude accordingly.

**Answer:**

Mahatma Gandhi and Jawaharlal Nehru played crucial roles in shaping the Indian freedom struggle.

**Differences in approach:**

- **Role of religion in politics:** **Gandhiji** believed that religion and morality were essential components of life and that they should be integrated into politics. But **Nehru** was more secular in his approach and believed that religion should be kept separate from politics.
  - E.g., **Gandhiji** advocated for incorporating elements of **Ramarajya** in the constitution while **Nehru** **pushed for a secular constitution**.
- **Approach to non-violence:** For **Gandhiji**, non-violence was a non-negotiable political expression that had to be practiced under all circumstances. **Nehru** also subscribed to non-violence but did not accept non-violence as a method for all situations at all times.
  - E.g., **Nehru** expressed his bewilderment at the suspension of the non-cooperation movement by **Gandhiji** in 1922.
- **Method of struggle:** Gandhi's strategy for political movements was characterized by the **struggle-truce-struggle approach**, that is, resistance and struggle (Satyagraha) were followed by periods of negotiation and truce. While Nehru's strategy was more aligned with **struggle till victory approach**.
- **Pace of the national movement:** In the 1920s, Nehru believed that the National Movement under Gandhi's leadership was moving at a slow pace. He wanted Congress to move beyond demand for **'Swaraj'** or **self-rule**. But Gandhi advocated for a gradual approach based on non-violent resistance and community development.

- E.g., during the **Madras session (1927)**, **Nehru** introduced the **Resolution for Poorna Swaraj (complete freedom)**, despite Gandhiji's disapproval.
- **Focus on class struggle:** **Nehru** advocated for **class struggle** and wanted to mobilise workers and peasants. **Gandhi** while acknowledging the existence of socio-economic disparities prioritized addressing these disparities through self-sufficiency and empowering the rural masses.
  - E.g., at the **1931 Karachi Session**, **Nehru pushed for socialist reforms like control of usury** while **Gandhi favored constructive measures** such as prohibition on intoxicating drinks.

Despite their differences, they both shared a commitment to non-violent resistance, fighting communal forces, and creating an inclusive national movement for India's independence.

Gandhi's emphasis on non-violence and grassroots mobilization, combined with Nehru's focus on modernization and secularism, provided a multifaceted leadership that played a pivotal role in India's struggle for independence.

#### Highlights:

#### Differences:

- **Religion in politics:** Gandhi integrated religion with politics (Ramarajya); Nehru advocated for a secular approach.
- **Non-violence:** Gandhi saw non-violence as essential; Nehru viewed it situationally, disagreeing with Gandhi's 1922 NCM suspension.
- **Method of struggle:** Gandhi used a S-T-S approach; Nehru preferred S-V.
- **Pace of movement:** Nehru wanted faster progress (e.g., Poorna Swaraj); Gandhi favored gradual non-violent resistance.
- **Class struggle:** Nehru emphasized class struggle and socialist reforms; Gandhi focused on self-sufficiency and rural empowerment.

### 3. **What are the key factors that accelerated decolonization post-World War II? (Answer in 150 words) 10**

#### **Approach:**

- Introduce by defining decolonization and providing its background.
- Write the factors that led to acceleration of the decolonization post-World War II.
- Conclude accordingly.

#### **Answer:**

**Decolonization** is the process by which colonies become independent of their colonizing country.

#### **Key factors that accelerated decolonization Post-World War II:**

- **Economic factors:** World War II bankrupted much of Europe, so the cost of maintaining thousands of soldiers and administrators in colonies became increasingly unfeasible.
  - E.g., the **United Kingdom** struggled to maintain its empire due to crippling war debt following WWII.
- **Post-war agreements:** Several countries on the losing side of World War II forfeited their colonies as terms of their surrender.
  - E.g., **Japan**—which ruled across thirteen modern-day countries—**renounced control of its empire in a 1951 peace treaty**.

- **Independence movements:** Long-standing independence movements put immense pressure on colonial powers to give up political control of colonies following World War II.
  - *E.g., in colonies such as **Ghana and India**, political groups spearheaded popular nonviolent protests.*
- **Role of third world countries:** International pressure from third world countries played a crucial role in supporting decolonization.
  - *E.g., international pressure through the **Non-Aligned Movement**.*
- **Role of international organisations:** The establishment of the United Nations in 1945 gave newly independent countries a forum to raise global support for decolonization.
  - *E.g., in 1960, a bloc of African and Asian nations organized **a resolution calling for the “complete independence and freedom”** of all colonial territories and its passage signaled a global decline of support for colonialism.*
- **Rise of Superpowers:** The rise of superpowers such as the United States and the Soviet Union, both of which opposed colonialism, supported independence movements and exerted indirect pressure on colonial rulers, hastening the process of decolonization.
  - *E.g., the **USSR contributed to the liberation of the Portuguese colonies** and the liquidation of racism and apartheid in the South of Africa.*

In the ten years following the end of the Second World War, with successive waves of decolonisation in Asia and Africa, the ‘Third World’ took its place as a new player in the international arena.

**Highlights:**

**Factors:**

- **Economic factors:** Post-WWII, Europe, especially the UK, couldn't afford to maintain colonies due to crippling war debts.
- **Post-war agreements:** Defeated WWII nations, like Japan, forfeited colonies as part of peace treaties (e.g., 1951 treaty).
- **Independence movements:** Strong independence movements in colonies like India & Ghana pressured colonial powers to withdraw.
- **International pressure:** Third World countries & org like UN and NAM supported decolonization efforts.
- **Rise of Superpowers:** US & USSR, opposing colonialism, backed independence movements, accelerating decolonization.

**4. How does human encroachment impact water bodies in urban areas? (Answer in 150 words)**

**10**

**Approach:**

- Discuss how humans are encroaching water bodies in recent times.
- State the impact of human encroachment on water bodies in urban areas with examples.
- Conclude accordingly.

**Answer:**

Encroachment of water bodies means illegal entry into the defined boundary of water bodies for various human activities like construction, agriculture, etc. In 2023, the Ministry of Jal Shakti's first census revealed approximately 35,000 water bodies encroached across India.

Human encroachment significantly impacts water bodies in urban areas in the following ways:

- **Increased pollution:** Rapid increase in urban population without corresponding expansion of civic facilities leads to dumping of sewage and solid waste in water bodies leading to pollution.
  - E.g., Pollution in Pallikaranai marshland (Chennai) due to dumping of solid waste.
- **Shrinking of lakes:** The growing demand for construction due to urbanization has led to illegal mining of materials like sand and quartzite, resulting in the encroachment and shrinking of lakes.
  - E.g., Illegal mining and encroachment have led to the drying of Badkhal lake (Faridabad), and decreased water level in Vembanad lake (Kochi).
- **Urban flooding:** Construction near water bodies reduces surface area, disrupting natural flow and causing flooding in surrounding areas.
  - E.g., Yamuna floodplain encroachment due to settlements and development projects was a major cause of Delhi's 2023 floods.
- **Loss of biodiversity:** Rapid urbanization and consequent encroachment of water bodies impact biodiversity by disrupting natural habitats, altering water flow patterns, and introducing pollutants.
  - E.g., Encroachment of Venkateshpura Lake for real estate development caused water quality decline, fostering invasive species like water cabbage, thereby drastically reducing biodiversity of the lake.
- **Disrupts hydrological cycle:** Urban encroachment through illegal construction on water body catchments reduces rainwater absorption, leading to lower storage capacity, reduced percolation, diminished groundwater recharge, and disrupted hydrological cycles.

Proactive measures, including strict enforcement of anti-encroachment policies, rejuvenation of water bodies, and public awareness campaigns, should be undertaken to preserve our water heritage and ensure a sustainable future for India.

**Highlights:**

**How human encroachment impacts water bodies in urban areas:**

- **Increased pollution:** Pallikaranai marshland (Chennai) - dumping of solid waste.
- **Shrinking of lakes:** illegal mining and encroachment - Badkhal lake (Faridabad), Vembanad lake (Kochi).
- **Urban flooding:** Yamuna floodplain encroachment – Delhi floods, 2023.
- **Loss of biodiversity:** encroachment of Venkateshpura Lake - water cabbage (invasive species).
- **Disrupts hydrological cycle:** lower storage capacity, reduced percolation, diminished groundwater recharge.

5. ***How do physical geographical features influence the development and operation of transportation systems? (Answer in 150 words)*** **10**

**Approach:**

- Introduce by establishing the link between physical geographical features and transportation.
- Discuss how these features influence the development and operation of transportation systems.
- Conclude accordingly.

**Answer:**

Physical geographical features of a region determine the feasibility, cost, and efficiency of different transportation modes. Understanding these influences is crucial for development and operation of effective transportation infrastructure as given below:

- **Topography:** Topography like mountains, valleys, plains etc. plays a crucial role in shaping the structure and efficiency of transportation networks.
  - E.g., roads can be designed in hilly regions to follow the natural contours of the terrain, with the flexibility to navigate around obstacles, and steep gradients. Whereas, railways perform best on flat, straight routes where they can maintain consistent speeds and high capacity.
- **Coastline:** Port sites are highly influenced by the physical attributes of the site like sheltered bays and inlets providing ideal locations.
  - E.g., Mumbai port is a natural deep-water harbor protected by the mainland of Konkan on its East and island of Mumbai on its West.
- **Hydrology:** The properties, distribution, and circulation of water play an important role in the transport industry.
  - E.g., navigable rivers like the Mississippi and Rhine have been central to transportation and trade, but regions with rapids and waterfalls, such as the Congo River in Africa, face significant navigation challenges.
- **Climate:** Weather conditions, including temperature, wind, and precipitation, affect transportation reliability and safety.
  - E.g., snowstorms in winter can cause significant delays and cancellations in air services across North America and Europe.
- **Temperature variations:** Temperature variations cause thermal expansion and contraction in transportation infrastructure materials, leading to maintenance challenges.
  - E.g., in regions with permafrost such as northern Canada, roads and railways require special design considerations to prevent damages from the freeze-thaw cycle.

By understanding and addressing the physical constraints, transportation systems can be designed to enhance connectivity, support economic growth, and improve the overall efficiency of moving goods and people.

**Highlights:**

**Influence:**

- **Topography:** Terrain influences transportation design. Roads in hilly regions, while railways perform best on flat, straight routes.
- **Coastline:** Port locations depend on sheltered bays and natural harbors - Mumbai port's natural deep water harbor.
- **Hydrology:** Water bodies affect transport; navigable rivers like the Mississippi aid trade, while rapids hinder navigation.
- **Climate:** Weather impacts transportation reliability, e.g., snowstorms cause air travel disruptions in winter.
- **Temperature variations:** Thermal expansion affects infrastructure, e.g., permafrost regions like northern Canada require special design considerations.

6. **How are ocean trenches formed? Describe the significant characteristics of these oceanic relief formations.**  
(Answer in 150 words) 10

**Approach:**

- Define ocean trenches in the introduction.
- Explain the process of ocean trench formation.



- Point out the significant characteristic of ocean trenches.
- Conclude accordingly.

**Answer:**

Ocean trenches are **deep, elongated depressions** on the ocean floor formed by tectonic activity. **Mariana Trench, Tonga Trench**, etc. are significant ocean trenches located in the Pacific Ocean.

**Process of ocean trench formation:**

- **Convergent plate boundaries:** Ocean trenches typically form at convergent plate boundaries where **tectonic plates collide**.
  - E.g., **Peru-Chile Trench** formed at convergent plate boundary of **Nazca plate and South American plate**.
- **Subduction process:** At convergent boundaries, often **denser oceanic lithosphere subducts beneath a less dense plate**, sliding into the mantle in a process called subduction.
  - E.g., **Mariana Trench** formed due to **subduction of Pacific Plate beneath the Philippine Plate**.
- **Formation of the trench:** As the denser plate subducts, it creates a deep, narrow trench on the ocean floor.

**Formation process of ocean trenches is closely associated with distinct oceanic characteristics, such as:**

- **Depth and shape:** Ocean trenches are **deepest parts of the ocean floor**, characterized by their V-shaped profile. **Depth and steepness vary based on subduction rate**.
  - E.g., At over 35,000 feet, **Challenger Deep in the Mariana Trench** is Earth's **deepest ocean point**.
- **Harsh and extreme conditions:** They represent some of the harshest environments on Earth, characterized by **extreme pressures and low temperatures**.
  - E.g., **Hadal trenches** experience pressures **1,100 times atmospheric pressure** and **temperatures as low as 1°C**.
- **Unique ecosystems and biodiversity:** They host unique ecosystems with life forms adapted to extreme pressures, no light, and frigid temperatures.
  - E.g., **Bulb-headed snail fish have gelatinous bodies** for deep-sea pressure, while **anglerfish use bioluminescent lures to attract prey**.
- **Association with volcanic and seismic activities:** Linked to seismic and volcanic activity due to tectonic plate interactions at convergent boundaries.
  - E.g., Deepest ocean trenches are located along the **Pacific Ocean's "Ring of Fire"**, a region **renowned for its active volcanoes and frequent earthquake zones**.

The knowledge and exploration of ocean trenches is crucial, as they broaden our understanding of the Earth's geology, **enrich biodiversity knowledge, and aid in climate and disaster management strategies**.

**Highlights:**

**Ocean trench formation**

- **Convergent plate boundaries:** tectonic plates collide. Peru-Chile Trench: Nazca plate and South American plate.
- **Subduction process:** Mariana Trench - subduction of Pacific Plate beneath Philippine Plate.
- **Formation of the trench:** denser plate subducts, creates deep, narrow trench.

**Characteristics**

- **Deepest parts of the ocean floor:** V-shaped profile. Challenger Deep in the Mariana Trench.
- **Extreme pressures and low temperatures:** 1,100 times atmospheric pressure; temperatures as low as 1°C - Hadal trenches.
- **Unique ecosystems and biodiversity:** Bulb-headed snail fish; anglerfish.
- **Seismic and volcanic activity:** Pacific Ocean's Ring of Fire.

7. **Identify the reasons behind increasing number of extreme rainfall events throughout India in recent times. Assess their socio-economic impact. (Answer in 150 words)** **10**

**Approach:**

- Define extreme rainfall events in introduction.
- Mention the reasons for increase in such events.
- Bring out the socio-economic impacts of such extreme events.
- Conclude accordingly.

**Answer:**

The extreme rainfall events are defined as instances in which the amount of rainfall experienced in a location substantially exceeds what is normal. For instance, a month's worth of rain for a given location falling in one day.

**Reasons:**

- **Increase in local humidity:** Local surface warming over the Indian subcontinent and the corresponding rise in humidity levels increases frequency of extreme rain events.
  - *E.g., according to the IPCC, one degree of increase in temperature leads to 7 per cent more water vapour. The heavier air masses result in rain bursts that can be 10 to 20 per cent heavier.*
- **Increase in frequency of western disturbances (WD):** WDs have increased significantly over the western and central Himalaya due to strengthening of the subtropical jet and becoming far more common in May, June, and July, months.
- **Ocean warming:** The rise in extreme rainfall events over central India is mainly due to an increase in the moisture content due to rapid warming of the equatorial Indian Ocean, especially, Arabian Sea and heightened variability in monsoon winds.

**Socio-economic impact:**

- **Agriculture:** Extreme rainfall can destroy standing crops, leading to significant losses for farmers causing shortages in food supply and price volatility.
  - *E.g., India lost 33.9 million hectares of the cropped area due to floods and excess rains between 2015 and 2021.*
- **Urban Flooding:** Extreme rainfall events lead to urban flooding causing large scale destruction of infrastructure and loss of human life.
  - *E.g., the 2015 floods of Chennai affected more than four million people in and around the city and caused economic loss of around 3 billion USD.*
- **Displacement:** Flooding and landslides caused by extreme rainfall can displace communities, leading to humanitarian crises.
  - *E.g., natural disasters, especially heavy floods and cyclones, triggered around 2.5 million internal displacements in India in 2022.*



- **Losses due to trade disruptions:** Extreme rainfall events damages infrastructure like roads, bridges, etc., affecting the trade, and leading to economic losses.
  - E.g., as per **World Meteorological Organisation**, India has suffered an economic loss of USD 4.2 billion in 2022 due to extreme weather events, especially floods.

Various measures can be taken to build resilience by updating zoning regulations and building codes, investing in flood control infrastructure, preventing deforestation in Himalayas, etc.

**Highlights:**

**Reasons:**

- **Local humidity increase:** Warming over India raises humidity, boosting extreme rain events.
- **Western disturbances (WD):** WD frequency rises over the Himalayas.
- **Ocean warming:** Warmer equatorial Indian Ocean increases moisture & extreme rainfall.

**Socio-economic impact:**

- **Agriculture:** Extreme rainfall destroys crops, 33.9 million hectares lost (2015-2021).
- **Urban Flooding:** Infrastructure damage and fatalities, 2015 Chennai floods caused \$3 billion losses.
- **Displacement:** Floods/landslides displace communities, 2.5 million displacements (2022).
- **Trade disruptions:** Damaged infrastructure hampers trade, \$4.2 billion loss in India (2022).

8. **India is expected to have the largest working-age population in the world by 2030 and it cannot afford low participation of women in the workforce anymore. Discuss. (Answer in 150 words)** **10**

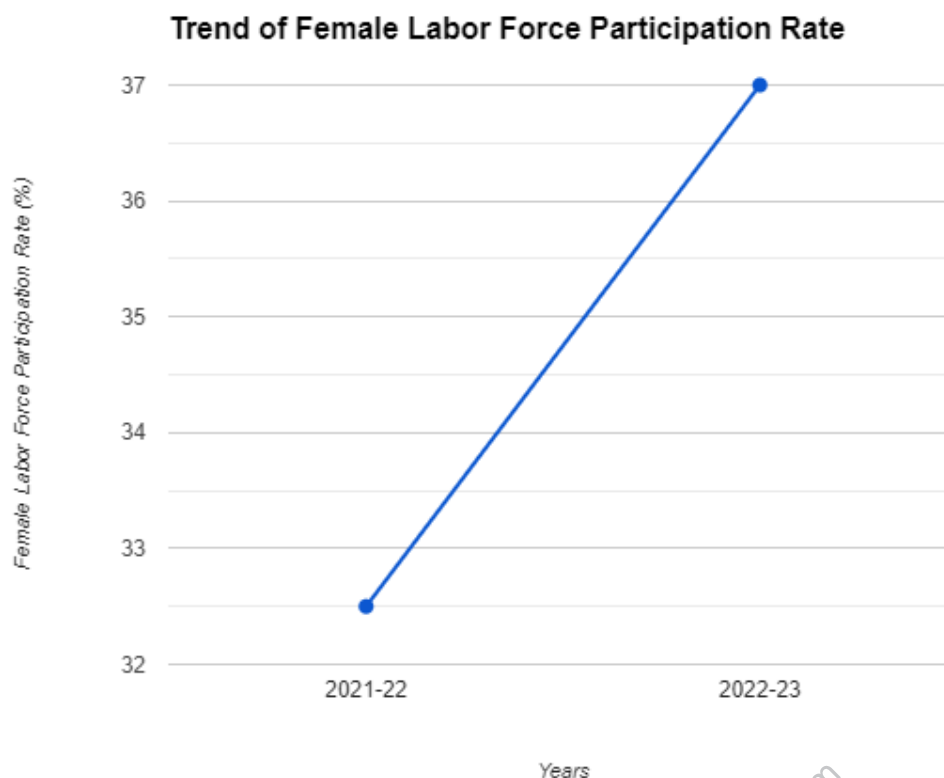
**Approach:**

- Introduce by giving some insights about the current trend of increasing working-age population and lower female labour force participation in India.
- Highlight why India cannot afford low participation of women in the workforce.
- Conclude by giving a way forward.

**Answer:**

India's working-age population is set to reach nearly 70% by 2030. However, the low participation of women in the workforce remains a significant hurdle in harnessing this demographic advantage effectively.

Though the female Labour Force Participation Rate (LFPR) as per PLFS report is increasing over the years (as seen in infographics) it remains below the global average of 50%. According to CMIE, in 2022-23, out of 405.8 million employed persons, 367.7 million were males and 38.2 million females, showing males held over 90% of jobs in India.



**India cannot afford low participation of women in the workforce due to following reasons:**

- **Economic growth and prosperity:** Equal workforce opportunities for women enable them to contribute skills, talents, and knowledge, leading to increased productivity, innovation, and overall economic growth.
  - E.g., A recent report suggests that for India to achieve 8% GDP growth over next five years, women must make up over half of the new workforce by 2030.
- **Demographic dividend:** According to the Economic Survey 2018-19, India's demographic dividend will peak around 2041. With women constituting nearly 50% of India's population, India needs to bring more women into the labour force and productive employment to reap the rewards of demographic dividend.
- **Women empowerment:** Women participation in the workforce provides financial independence, enabling women to make autonomous decisions about marriage, childbearing, and other life choices, fostering greater gender equality.
- **Achieving SDGs:** Women's engagement in the workforce is intricately linked to the attainment of SDGs and by unlocking its female talent potential, India can achieve faster progress on multiple SDGs simultaneously.
  - E.g., Women's workforce participation enhances SDG 4 (Quality Education) by enabling investment in their own and their children's education, improving outcomes.

Empowering women in the workforce requires corporations, policymakers, and the government to foster a supportive environment. ILO recommends providing childcare facilities, equal pay, anti-discrimination legislation, and gender-responsive policies to boost women's participation in the labor force.

**Highlights:**

**Reasons India cannot afford low participation of women in the workforce:**

- **Economic growth and prosperity:** increased productivity, innovation, and overall economic growth.
- To reap the rewards of **demographic dividend**.
- **Women empowerment:** financial independence, autonomous decisions about marriage, childbearing, and other life choices.
- **Achieving SDGs:** enhances SDG 4.

9. ***Do you agree that there has been a progressive secularization of caste in India? Support your view with relevant examples. (Answer in 150 words)*** **10**

**Approach:**

- In the introduction, explain the concept of secularization of caste.
- Mention about progressive secularization of caste in India with examples.
- Point out the persistent traditional roles of caste.
- Conclude accordingly.

**Answer:**

Secularization of caste refers to **transformation of caste** from a structure defined by **religious and ritual purity** to one that engages in **secular interests** like political power, economic opportunities, and social mobility.

**Secularization of caste in India is evident by:**

- **Horizontalization of caste:** It reflects the transformation of caste consciousness from **hierarchical to community-focused**, facilitating competition among different castes for socio-economic and political standing.
  - E.g. Caste organizations like the **Dalit Mahasabha** and **Akhil Bharatiya Kshatriya Mahasabha** advocate for the rights and empowerment of their respective caste members.
- **De-Ritualization of caste:** It marks the decline of traditional caste practices that enforced segregation based on ritual purity.
  - E.g. Constitutional **abolition of untouchability**.
- **Classisation of caste:** It sees caste identities merging with economic and class identities, where economic interest and social-political identification overshadow traditional caste distinctions.
  - E.g. Indian **middle-class** with **31% of the population** comprises members from **various castes**.
- **Caste in democratic processes:** Emergence of caste-based political parties has made caste a potent force in the Indian electoral process.
  - E.g. Parties like the **Bahujan Samaj Party (BSP)** cater to the Dalit community using caste as a basis for political mobilization.
- **Reorientation of caste status:** In recent years, various castes are seeking to be reclassified as backward to avail the benefits of reservation policies.
  - E.g. Demands by **Jats** in northern India and **Patels** in Gujarat for inclusion in **OBC category**.

Despite these secular changes, certain **traditional role of caste still persists:**

- **Caste endogamy:** Marriages within the same caste are still prevalent, supported by both social norms and modern platforms like matrimonial websites.
  - *E.g. According to the India Human Development Survey (2011-12), only about **5% of Indian marriages are inter-caste.***
- **Persistence of Manual Scavenging:** Despite legal prohibitions and social reforms, the traditional and demeaning practice of manual scavenging persists, predominantly carried out by individuals from lower castes.

While caste has gone through significant secularization in many public and political arenas, it continues to exert traditional influences in personal and cultural domains.

**Highlights:**

**Secularization of Caste:**

- **Horizontalization:** Shift from hierarchical to community-focused, e.g., caste organizations like Dalit Mahasabha advocate for rights.
- **De-Ritualization:** Decline in caste-based segregation, abolition of untouchability.
- **Classisation:** Caste identities merge with economic/class identities, diverse Indian middle-class.
- **Caste in politics:** Caste-based parties influence elections, e.g. BSP mobilizes Dalits.
- **Reorientation:** Castes seek reclassification for reservations, Jats and Patels demand OBC status.

**Persistence of Traditional Caste Roles:**

- **Endogamy:** Caste-based marriages prevalent e.g. 95% are intra-caste (India Human Development Survey).
- **Manual Scavenging:** Continues despite legal bans, mostly by lower castes.

**10. Why is inequality increasing in India despite the fall in overall poverty? (Answer in 150 words)**

**10**

**Approach:**

- Give a brief overview of decline in poverty in India.
- Highlight the reasons for increase in inequality in India.
- Conclude appropriately.

**Answer:**

The **UNDP's 2024 Asia-Pacific Human Development Report** highlights India's significant progress in reducing poverty and improving living standards. Between 2004 and 2019, **poverty rates plummeted from 40% to 10%.** Moreover, between 2015-16 and 2019-20, **'Multidimensional poverty' fell from 25% to 15%.**

However, it also highlighted an increase in inequality over the years where **top 10% of the population gets 57% of the national income and top 1% gets 22%.**

**Reasons for increasing inequality in India**

- **Growth pattern after 1991 reforms:** India's economic growth has been uneven, benefiting certain sectors and regions disproportionately.
  - *E.g., **Share of the top 1% in national income increased steadily,** while bottom 50% saw a decline post-1991 (World Inequality Database).*

- **Education and skill gaps:** Unequal access to quality education and skill development fuels income disparity, especially in sectors like IT and finance which require specialized skills.
  - E.g., **Only 51% of graduates in India are deemed employable** (Economic Survey 2023-24).
- **Informal sector:** The labor market in India is characterized by a large informal sector where wages are low and job security is minimal.
  - E.g., **Informal sector accounts for more than three-fourths of employment.**
- **Government Policies:** Tax policies have favoured the wealthy, reducing the progressivity of the tax system. Rising indirect taxes imposes equal tax burden on unequal citizens.
  - E.g., **Since 2010-11 the share of indirect taxes in national income has increased** almost consistently, while the share of direct taxes has declined.
- **Regional Disparities:** Urban areas with better infrastructure and governance attract more investment, leading to better economic outcomes compared to rural areas.
  - E.g., **Average earnings of a rural worker were close to half** of an urban worker (PLFS 2018-19 data).

Addressing these above issues requires focus on inclusive growth, improved education and healthcare access, social security for informal workers and progressive taxation.

**Highlights:**

Poverty rates - 40% to 10% (2004-2019); top 10% - gets 57% of the national income and top 1% gets 22%.

**Reasons for increasing inequality**

- **Growth post-1991 reforms:** Share of the top 1% increased steadily.
- **Education & skill gaps:** Only 51% of graduates employable.
- **Informal sector:** More than three-fourths of employment.
- **Government Policies:** Since 2010-11, share of indirect taxes increased.
- **Regional Disparities:** rural worker earnings close to half of urban worker.

**11. How did the competitive and hostile dynamic between Brahminism and Buddhism over funding, followers, and ideology mark the decline of Buddhism? (Answer in 250 words)** **15**

**Approach:**

- Give a brief overview of the decline of Buddhism.
- Discuss how the dynamic between Brahmanism and Buddhism over funding, followers, and ideology marked the decline of Buddhism.
- Conclude accordingly.

**Answer:**

During the **Mauryan period, Buddhism flourished due to significant royal patronage**, which aided its spread and institutional development. However, **by the 12th century AD, Buddhism had largely declined in India due to various reasons.**

**Role of conflicts with Brahmanism over funding, followers, and ideology was crucial in Buddhism's decline:**

- **Funding:**
  - **Declining royal patronage:** With the revival of Brahmanism, many rulers shifted their support away from Buddhism, **weakening morale and material support.**

- E.g. the Pala dynasty was one of the last great royal patrons of Buddhism.
- **Followers:**
  - **Shift to Sanskrit language:** Initially Pali was used for Buddhist scriptures and preaching, maintaining a connection with the masses. Over time, Buddhist monks adopted Sanskrit, the scholarly language of the Brahmins, distancing themselves from the masses.
  - **Brahminical hostility:** Acts of bitter conflicts between the Buddhist monks and Brahmins created insecurity among the Buddhist followers.
    - E.g. the Shaivite Brahmin king of Bengal, Shashanka, destroyed the Bodhi tree in Bodh Gaya under which the Buddha had attained enlightenment.
- **Ideology:**
  - **Brahminical appropriation:** The incorporation of some Buddhist practices, such as monastic orders and the cessation of animal sacrifices, boosted Brahmanism's appeal to Buddhist masses.
    - E.g. Adi Shankaracharya established various Mathas, leading to the institutionalization of Brahmanism along similar lines to Buddhism.
  - **Buddha as an avatar of Vishnu:** The identification of Buddha as the 9<sup>th</sup> avatar of Vishnu helped Brahmanism to reassert its prominence. This made it easier for followers to transition from Buddhism to Brahmanism.
  - **Adoption of rituals and ceremonies by Buddhist monks:** Initially a reformist movement, Buddhism gradually saw its monks adopt rituals and ceremonies prominent in Brahmanism, which they had once opposed.

Invasions by the Huns in the 5th and 6th centuries, and later by Turkish invaders in the 12th century, led to the destruction of many Buddhist monasteries. By the 12th century, Buddhism had nearly vanished from its birthplace.

**Highlights:**

**Role of conflict behind decline of Buddhism:**

- **Funding:** declining royal patronage – Pala dynasty last royal patrons of Buddhism.
- **Followers:** shift from Pali to Sanskrit, conflicts between Buddhist monks and Brahmins created insecurity - Shaivite Brahmin king of Bengal, Shashanka, destroyed the Bodhi tree.
- **Ideology:** Brahminical appropriation - Adi Shankaracharya established Mathas; Buddha as an avatar of Vishnu; adoption of rituals and ceremonies by Buddhist monks.

**12. European travellers' accounts in the medieval period have played an important role in shaping our understanding of the empires and people of that period in India. Comment. (Answer in 250 words) 15**

**Approach:**

- Introduce with the context of European exploration of India.
- Explain how accounts from these travellers have shaped the understanding of the empires and people of that period.
- Conclude accordingly.

**Answer:**

From the 15<sup>th</sup> to the 18<sup>th</sup> centuries, many Europeans came to India for trade, work, and diplomatic visits. Their detailed writings provide valuable insights into India's social, political, and cultural life during that time.



Some of the significant travellers are:

- **Afanasy Nikitin:** He was a Russian merchant who visited regions such as Diu, Chaul, and Gulbarga in the second half of the 15<sup>th</sup> century.
  - He noted the similarity in dress styles of royalty and their servants in Chaul, highlighting minimal class distinctions.
  - He described Calicut as a vital port famous for spice trade, Khambhat's indigo production, etc. which reveal regional specialization of trade.
- **Domingo Paes:** He visited Vijayanagara Empire in the first half of the 16<sup>th</sup> century during the reign of Krishnadeva Raya.
  - Paes described the grandiosity of the Mahanavami festival and the architectural beauty of temples like Virupaksha, highlighting the cultural richness of the empire.
  - He noted the strategic economic planning, extensive irrigation systems, etc., highlighting the empire's organizational prowess.
- **Sir Thomas Roe:** He was an English ambassador who visited the court of Jahangir in the early 17<sup>th</sup> century.
  - Roe detailed the strict protocols and theatrical nature of Mughal court which revealed both the magnificence and the rigid traditions of courtly life.
  - He noted Jahangir's secular approach and personal interactions with diverse religious figures, emphasizing the cultural pluralism of the Mughal Empire.
- **Francisco Pelsaert:** Pelsaert was a Dutch factor who lived in Agra during Jahangir's time.
  - He documented the social conditions of artisans and shopkeepers in Agra and highlighted their struggles for wages and exploitation by the nobility.
- **Jean Baptiste Tavernier:** He was a French jeweller who visited India in the 17<sup>th</sup> century and extensively explored India's diamond trade and documented his visits to major mining centres like Golconda.
- **Francois Bernier:** He was a French physician who stayed in India during the rule of Aurangzeb.
  - He documented events of the succession war after Shahjahan, offering detailed character studies of key figures like Dara and Aurangzeb, which reveal the personal and political complexities.
- **Nicolo Manucci:** He was an Italian traveller who served in various capacities under Mughals during Dara Shikoh and Aurangzeb's period.
  - He described the influential roles of women like Princess Jahanara in the Mughal polity.
  - He observed the autocratic governance in southern India's Nayaka kingdoms.

Due to relative paucity of reliable sources in vernacular languages and the low emphasis on history writing in India, European travelogues is considered as one of the most reliable sources on late medieval and early modern India.

**Highlights:**

**Travelers:**

- **Afanasy Nikitin:** Russian (15<sup>th</sup> C), noted minimal class distinctions in Chaul & Calicut's spice trade.
- **Domingo Paes:** Vijayanagara Empire in 16<sup>th</sup> C, described grand festivals & temple architecture.
- **Sir Thomas Roe:** English (17<sup>th</sup> C), detailed Mughal court protocols & Jahangir's cultural pluralism.
- **Francisco Pelsaert:** Dutch factor in Agra during Jahangir's reign; documented artisans' social conditions.
- **Jean Baptiste Tavernier:** French (17<sup>th</sup> C), explored India's diamond trade.
- **Francois Bernier:** French, Aurangzeb's rule; documented succession wars.
- **Nicolo Manucci:** Italian, described influential women in Mughal polity, Nayaka kingdoms' autocratic governance.

13. **The British victory in the Battle of Plassey in 1757 not just changed the course of Indian history but also that of the world. Discuss. (Answer in 250 words)** 15

**Approach:**

- Give a brief overview of the Battle of Plassey.
- Discuss the impact of the Battle of Plassey on India.
- Explain how it changed the course of world history.
- Conclude accordingly.

**Answer:**

The Battle of Plassey, **fought on June 23, 1757, between the British East India Company (EIC) and the Nawab of Bengal, Siraj-ud-Daulah**, had profound consequences for India and the world.

**Impact on India:**

- **Start of the British rule:** By **installing puppet Nawab Mir Jafar** on the throne after the battle, **the EIC established its political and economic domination in Bengal**.
- **Drain of wealth:** Following victory, **the British extracted significant wealth from Bengal, known as the 'Plassey Plunder'**. EIC officials **amassed personal fortunes through the misuse of dastaks**.
  - *E.g. Robert Clive estimated that the **Company and its servants had collected more than 30 million rupees** from the puppet Nawab.*
- **Bengal famine:** Bengal, which was **formerly a prosperous province**, started becoming an **area of hunger, famine, and deprivation** after this battle.
  - *E.g. **declining agricultural productivity and increased taxes** on Indian farmers led to the **Bengal famine of 1769-70**, during which a quarter of the population perished.*
- **Exposed weaknesses of the Indian rulers:** The EIC realized that India could be subdued with the cooperation of Indian rulers, **who were divided and lacked a sense of nationalism**.

**Impact on the world:**

- **Industrial Revolution in Britain:** Historians and economists like **R.P. Dutt argue** that the Industrial Revolution was **fueled by wealth plundered from Bengal**.
  - *E.g. Major inventions like **Hargreaves' spinning jenny, Crompton's mule, and Cartwright's power loom** appeared **between 1764 and 1785**, funded by resources from India.*
- **Opium Wars in China:** After battle, the **British gained control over opium production in Bengal**. This became **the primary source of opium for illegal British trade in China**, eventually leading to the Opium Wars.
  - *E.g. the **major Indian source of British opium bound for China was Patna** in Bengal.*
- **Seven Years' War:** The Battle of Plassey was part of **the larger Seven Years' War (1756-1763) between Britain and France**. The British victory at Plassey was a **key milestone in their triumph over the French**, significantly altering the global balance of power.

The Battle of Plassey was a watershed moment in history, **shaping the future of British colonial rule in India and having far-reaching consequences for global geopolitics**, particularly in Asia.

**Highlights:**

**Impact on India:**

- **Start of British rule:** installed Mir Jafar – political/economic domination in Bengal.
- **Drain of wealth:** Plassey plunder.

- **Bengal famine:** hunger, famine, deprivation.
- **Exposed weaknesses of Indian rulers**

**Impact on World:**

- **Fueled Industrial Revolution in Britain:** Hargreaves' spinning jenny, Crompton's mule, Cartwright's power loom.
- **Opium Wars in China:** gained control over opium production in Bengal.
- **Seven Years' War:** Plassey - key milestone.

**14. Why was it more difficult to rehabilitate refugees in West Bengal as compared to Punjab after partition? (Answer in 250 words)** **15**

**Approach:**

- Give a brief overview about the refugee crisis faced by India immediately after independence.
- Explain how the refugee crisis in Punjab differed from that in West Bengal.
- Conclude accordingly.

**Answer:**

The partition of India in 1947 led to one of the **largest population movements** in history, **displacing an estimated 14–18 million people**. The history of refugee migration and resettlement **primarily impacted Punjab and West Bengal**. Both regions, however, present **contrasting pictures**, as discussed below:

- **Duration of migration:** After the 1947 Partition, Hindus and Sikhs from West Pakistan migrated all at once, whereas **Hindus from East Bengal continued to migrate for years**. This prolonged exodus **complicated their rehabilitation** in Bengal, requiring ongoing efforts to **provide work, shelter, and psychological support**.
- **Evacuee property:** Refugees from West Pakistan **settled in large lands** left by Muslim migrants from Punjab, Uttar Pradesh, and Rajasthan, easing resettlement. In contrast, **West Bengal's small land holdings and high population density** made resettlement more challenging.
- **Linguistic affinity:** It was easier for Punjabi and Sindhi refugees to settle in today's Himachal Pradesh, Haryana, western Uttar Pradesh, Rajasthan and Delhi. The resettlement of the refugees from East Bengal **could take place only in Bengal and to a lesser extent in Assam and Tripura**. When the West Bengal government tried to resettle them in the neighbouring states of Bihar, Orissa, etc., the refugees by and large tried to resist this policy.
- **Indifference of the Central government:** **Initially, the Central government** was indifferent to the refugee crisis in West Bengal, **focusing on resettling seven million refugees in Punjab**. It was **only in 1950**, when the scale of migration began to rise due to increasing violence against minorities in East Pakistan, that **the Nehru-Liaquat pact** was signed. The Pact aimed to regulate migration and restore minority confidence.
- **Difference in policies of state government:** The **West Bengal government's rehabilitation policy was lackadaisical from the beginning** and fell short to solve this massive human problem. E.g. **while Punjab government made immediate arrangements for temporary settlement and also introduced policies for permanent settlement by 1948, the West Bengal government took more time than usual even to organize the relief camps**.

There were significant differences in the history of migration and rehabilitation of the refugees in Punjab and West Bengal. While the state government in Punjab managed to devise an effective blueprint for rehabilitation, the process in West Bengal continued for a very long time. The **Refugee, Relief and Rehabilitation Department** continued to exist as a separate department in West Bengal till 2016.

**Highlights:**

**Why difficult to rehabilitate refugees in West Bengal compared to Punjab?**

- Prolonged exodus **complicated rehabilitation** in Bengal.
- **Bengal:** small land holdings, high population density; **Punjab:** large lands in Punjab, UP, Rajasthan.
- **Linguistic affinity:** Punjabi and Sindhi refugees settled in HP, Haryana, western UP, Rajasthan, Delhi. Resistance in Bihar, Orissa on resettling refugees from East Bengal.
- **Indifference of the Central government:** Nehru-Liaquat pact.
- **Difference in policies of state government:** lackadaisical rehabilitation policy of West Bengal government.

15. ***Discuss the economic and social costs associated with the transition from coal to green energy in India.***  
(Answer in 250 words) **15**

**Approach:**

- Introduce by writing about India's plan of transition from coal to green energy.
- Write about the economic costs of transition.
- Highlight the social costs of this transition.
- Conclude appropriately.

**Answer:**

India's ambitious goal of **decarbonizing energy to 50% by 2030** has paced up its transition from coal to green energy. However, such a transition comes with significant economic and social costs.

**Economic costs of transition:**

- **Employment costs:** The states heavily dependent on coal for livelihoods may face high **unemployment rates**, especially in the absence of alternative job opportunities.
  - *E.g., about **13 million people** are employed in various sectors associated with coal in India.*
- **Loss of revenue:** Foregoing of large amount of revenues due to the coal phase-out may impact **fiscal health of both the central and state governments**.
  - *E.g., coal industry is responsible for **10% and 2% of the central and state** governments' energy tax revenues, respectively.*
- **Costs on infrastructure:** Coal phase-out may hamper the quality and quantity of public infrastructure development undertaken by coal companies through Corporate Social Responsibility (CSR) initiatives.
  - *E.g., **Coal India Limited spent INR 548.98 crores in 2021-22**, on healthcare, education and rural development through its CSR initiatives.*
- **Multiplier costs on economy:** Coal mines, often located in remote areas, drives entire economy of these regions and shutting them down can have a ripple effect on their entire economy.
  - *E.g., at least **half of all the districts in Jharkhand and West Bengal** are likely to be impacted due to the impending coal transitions.*

### Social costs of transition:

- **Impact on vulnerable sections:** The workers employed formally and informally in coal and related industries typically includes low-skilled migrants who would face difficulties in transition due to the technical nature of the green industries
- **Privatization:** The coal-to-renewables transition relies heavily on private sector involvement. However, unlike Coal India Limited, private firms lack sensitivity to local socio-economic development needs and aspirations.
- **Displacement of population:** Aggressive clean energy expansion risks repeating past injustices of eastern coal-rich regions, like land dispossession and rights abuses, especially against indigenous and ethnic minority groups.
- **Unsustainable resource extraction:** Increased extraction of critical minerals for clean energy risks social and environmental costs, as India has a poor record in upholding safeguards in mining projects.
- **Impact on poor population:** Cheap energy prices are important for energy access. Since the transition to clean energy is costly in short run, it may decrease people's access to energy and their standard of living.

Thus, energy transitions should follow Just Transitions Principle to ensure positive environmental, social, and economic outcomes.

#### Highlights:

##### Economic costs

- **Employment costs:** 13 million in coal-related sectors.
- **Loss of revenue:** 10% and 2% of the central and state governments' energy tax revenues.
- **Costs on infrastructure:** Coal India Limited CSR initiatives.
- **Multiplier costs on economy:** half of the districts in Jharkhand and West Bengal.

##### Social costs

- **Impact on vulnerable sections:** low-skilled migrants.
- **Privatization:** insensitivity to people's aspirations.
- **Displacement of population:** land dispossession; abuse of rights.
- **Unsustainable resource extraction:** environmental costs.
- **Impact on poor population:** energy access.

16. *Explain the process of formation of volcanic calderas. How do they contribute to the scenic beauty of the region? (Answer in 250 words)* 15

#### **Approach:**

- Introduce by defining volcanic calderas.
- Explain its process of formation.
- Along with examples, mention the features of calderas that add to scenic beauty.
- Conclude appropriately.

#### **Answer:**

A caldera forms when a volcano's structural support weakens, causing its surface to collapse. Ranging from 1 to 100 kilometers in diameter, these large volcanic craters develop through two different methods.

## Explosive Calderas

- Large underground magma chambers filled with silica-rich, high-viscosity magma trap gas bubbles, creating extremely high pressures.
- As the pressurized magma rises towards the surface, the decreasing pressure causes the trapped gases to expand significantly.
- When expanding gases exceed strength of the overlying rock, a massive explosion occurs, blasting away rock and magma, forming a caldera and ejecting many cubic kilometers of material into the surroundings.
- *E.g., caldera about 50 miles long and nearly 30 miles wide that underlies Yellowstone National Park.*

## Collapse Calderas

- A large magma chamber beneath a volcano empties through a significant volcanic eruption or subsurface magma movement.
- The depletion of magma leaves the overlying rock unsupported, creating a potential for collapse.
- The unsupported roof rock collapses into the emptied chamber, forming a large crater, known as a caldera.
- *E.g., Crater Lake in Oregon, USA was formed after enormous volcanic eruption emptied a large magma chamber below Mount Mazama.*

## Contribution to Scenic Beauty

- **Unique and scenic landscapes:** The steep cliffs and distinctive geological features provide awe-inspiring views that attract many visitors. Moreover, calderas are home to crater lakes that offer panoramic views.
  - *E.g., The Greek island of Santorini, a remnant of volcanic caldera, offers scenic beauty of its caldera cliffs and shimmering sea.*
- **Rich and vibrant ecosystems:** The unique environment within calderas support diverse ecosystems, which is home to rich wildlife that attract visitors.
  - *E.g., Ngorongoro Crater in Tanzania, the world's largest intact volcanic caldera, hosts a unique ecosystem with waterfalls coming down and forming lake at the bottom full of flamingos and other fauna on its shores.*
- **Geothermal Features:** Calderas often host various geothermal features such as hot springs, geysers, and fumaroles, which contribute to the region's beauty and attract visitors.
  - *E.g., More than 10,000 hydrothermal features are found in Yellowstone caldera in the USA.*
- **Biodiversity Hotspots:** Many Calderas are biodiversity hotspots due to their unique microclimates and isolated environments, which foster the development of diverse and often endemic species.
  - *E.g., Wollumbin caldera in Australia, a World Heritage site, is home to over 200 rare and endangered plant and animal species.*

Apart from this, they hold cultural and historical significance for the local communities as the central theme of local myths, traditions and historical narratives.

### Highlights:

#### Formation process

- **Explosive Calderas:** silica-rich magma traps gas bubbles; pressurized magma rises; massive explosion; blasting away rock and magma forming a caldera; Yellowstone National Park.



- **Collapse Calderas:** large magma chamber beneath a volcano empties; overlying rock unsupported; collapses forming a large crater, known as caldera; Crater Lake in Oregon.

#### Contribution to scenic beauty

- **Unique and scenic landscapes:** Greek island of Santorini.
- **Rich and vibrant ecosystems:** Ngorongoro crater.
- **Geothermal features:** 10,000 hydrothermal features in Yellowstone caldera.
- **Biodiversity hotspots:** Wollumbin caldera, Australia.

17. **What are the reasons behind the increased frequency and intensity of heat waves globally? How will it impact global food security? (Answer in 250 words)** 15

#### Approach:

- Introduce with rising incidences of heat waves.
- Write the reasons for this increase.
- Explain the impact of rising heat waves on global food security.
- Conclude accordingly.

#### Answer:

According to the **Sixth Assessment Report of the IPCC**, human-caused climate change has **increased the frequency and intensity of heatwaves since the 1950s**. Above-average temperatures were reported from land and sea areas across the world in 2023.

#### Reasons for increase in heatwaves:

- **Increasing temperatures and Climate Change:** Rising global temperatures from human activities like fossil fuel burning and land-use changes increase heatwave frequency and severity.
  - *E.g. as per **WMO, every additional 0.5°C of global warming increases the intensity and frequency of temperature extremes, including heatwave intensity, frequency and duration.***
- **Urbanisation and Urban Heat Island Effect (UHI):** Rapid urbanization intensifies heatwaves due to the UHI effect, as urban areas, with heat-retaining materials like concrete and asphalt, become warmer than surrounding rural areas.
  - *E.g. It is estimated that urban areas can experience mid-afternoon temperatures **15°F to 20°F higher than surrounding vegetated areas.***
- **El-Niño conditions:** The El Niño phenomenon, characterized by natural climate variability, **disrupts temperature and precipitation** patterns globally, leading to increased instances of heatwaves. As per recent study, **El Niño events are likely to become more frequent by 2040.**

#### Impact of rising heat waves on global food security

- **Crop yield reductions:** Higher temperatures can adversely affect agricultural yields by disrupting plant growth and development.
  - *E.g., one study estimates that each **1°C increase in global mean temperature** could see reductions in global **yields of wheat (6%), rice (3.2%), and maize (3.2%).***
- **Impact on livestock:** In addition to increasing mortality, extreme heat leads to lower fertility and resilience to disease. It can also impact production of eggs, milk, and other livestock goods.

- E.g., exposure of dairy cows to heat stress leads to **decreased feed intake, lower milk yield, and poor milk quality.**
- **Fisheries:** Warming of water impacts fish diversity, distribution, abundance and phenology affecting food security especially in coastal communities.
  - E.g., Heat stress causes dramatic die-offs, such as the **2021 “heat dome” along Canada’s Pacific coast,** which killed an estimated 1 billion marine animals.
- **Food storage:** The temperature extremes during food storage and transportation processes can result in **food losses and shortened shelf life.**
- **Food access and prices:** Heatwave-induced crop failures worsen food insecurity for vulnerable populations and drive-up food prices, a.k.a. **‘heatflation’**, disproportionately affecting low-income groups.

Addressing the crisis of heat waves requires a multi-faceted approach that involves reducing emissions, adapting agricultural practices, and improving global cooperation to ensure food security in a warming world.

**Highlights:**

**Reasons for increase in heatwaves**

- **Climate Change:** every 0.5°C of global warming increases intensity.
- **Urban Heat Island Effect:** 15°F to 20°F higher than surrounding vegetated areas.
- **El-Nino conditions:** disrupts precipitation patterns globally.

**Impact on Global food security**

- **Crop Yield Reductions:** wheat (6%), rice (3.2%), maize (3.2%).
- **Impact on Livestock:** increasing mortality; lower production of eggs, milk.
- **Fisheries:** 2021 “heat dome” along Canada’s Pacific coast.
- **Food storage:** food losses; shortened shelf life.
- **Food Access and Prices:** heatflation.

**18. Identifying the characteristics of the grassland biome, mention the threats posed to Banni grasslands in India. (Answer in 250 words)** **15**

**Approach:**

- Give a brief introduction about the grassland biome.
- Discuss the characteristics of various types of grasslands.
- Mention the threats posed to Banni grasslands in India.
- Conclude accordingly.

**Answer:**

A grassland biome is characterised by **vast expanses of open spaces dominated by grasses, herbs,** and other non-woody vegetation with few or no trees. It represents a **diverse terrestrial ecosystem** on all continents except Antarctica.

The characteristics of grasslands are as follows:

- **Classification:** Grasslands are classified into tropical and temperate grasslands. Examples of temperate grasslands include Eurasian steppes, North American prairies, etc. Tropical grasslands include hot savannas of sub-Saharan Africa and northern Australia.
- **Climate:** The climate of grasslands depends on the region, but they generally have warm to hot summers and cold to mild winters.
  - **Temperature:** Grasslands typically experience warm summer temperatures, with an average of around 20–25 °C, and mild winters with temperatures around 0–10 °C.
  - **Precipitation:** Grasslands receive 25-75 cm of rain annually in temperate regions and 50-150 cm in tropical areas.
- **Soil type:** Grassland soils are often rich and fertile, as grasses frequent growth and decay contribute organic matter to the soil.
- **Biodiversity:** Grasslands host diverse plants like buffalo grass and coneflowers, large herbivores such as bison and gazelles, predators like lions and cheetahs, and smaller species including ground-nesting birds, rodents, and insects.
- **Fire adaptation:** Free fires in grasslands are due to lightning strikes and human intervention. Many grassland plants benefit from periodic fires, as they help control the growth of woody vegetation and stimulate the germination of certain plant species.

Banni grasslands, situated in the Kutch district of Gujarat, are the largest grasslands in Asia.

These salt-tolerant grasslands are currently facing the following threats:

- **Exotic species:** Invasive species are one of the main reasons behind the degradation of Banni grasslands. E.g., *Prosopis juliflora*, a non-native and invasive tree species, has encroached over half Banni grasslands.
- **Overgrazing:** Overgrazing by large livestock in Kutch has exceeded the Banni grasslands' carrying capacity, threatening local fauna.
- **Development activities:** Developmental activities, such as roads, industries, mining, etc. have fragmented Banni grasslands. Further, the discharge of chemical effluents from industries near the Banni borders is harming wetlands that serve as habitats for migratory flamingos.
- **Climate change:** Climate change is threatening the Banni grasslands by altering rainfall patterns and increasing temperatures, leading to desertification and loss of biodiversity.

Grasslands, adapted to fire and climate variability, support diverse flora and fauna, crucial for global biodiversity. Emphasizing the importance of preserving these ecosystems, restoration efforts like the Banni Grassland Restoration Project must incorporate both biotic and abiotic factors while engaging local communities for sustainable conservation practices.

**Highlights:**

**Characteristics of grasslands**

- Classified into **tropical** (hot savannas of sub-Saharan Africa and northern Australia) and **temperate** grasslands (Eurasian steppes, North American prairies).
- **Climate:** warm to hot summers and cold to mild winters.
- **Soil type:** rich and fertile.
- **Biodiversity:** **host diverse plants**, large herbivores, predators, smaller species.
- **Fire adaptation:** Free fires due to lightning strikes and human intervention.

#### Threats to Banni grasslands

- **Invasive species:** Prosopis juliflora
- **Overgrazing**
- **Development activities:** developmental activities
- **Climate change:** desertification and loss of biodiversity.

19. *India's approach to secularism does not merely challenge inter-religious domination but intra-religious domination as well. Discuss. (Answer in 250 words)* 15

#### Approach:

- Give a brief overview of India's approach to secularism.
- Discuss the ways in which secularism in India addresses intra-religious oppression.
- Similarly, state how secularism in India addresses inter-religious domination.
- Conclude appropriately.

#### Answer:

Indian model of secularism is **distinct from the Western model** in that it **establishes a principled distance between the state and religion**, rather than a strict separation of religion from state. While it treats all religions equally, it **allows for state intervention** to reform oppressive and discriminatory religious practices. Thus, it is a **broad concept** and encompasses several aspects.

#### Secularism in India addresses intra-religious domination in the following ways:

- **Addresses caste-based discrimination:** The Indian Constitution addresses caste-based discrimination by banning untouchability (Article 17) and allows for special safeguards for the Scheduled Castes. Further, the Scheduled Castes are not prevented from entering Hindu temples.
- **Promotes gender justice:** The Indian Constitution forbids gender discrimination based on religion and this has been affirmed by the Supreme Court. E.g. *Custom of prohibiting women in their 'menstruating years' from entering the Sabarimala temple* was **declared unconstitutional** by the Supreme Court.
- **Addresses discriminatory aspects of personal laws:** Personal laws can cause discrimination based on religious customs, such as **instant triple talaq** affecting Muslim women. In the **Shayara Bano case** (2017), the **Supreme Court declared this practice unconstitutional**.
- **Equality before law:** The Constitution does not discriminate any Indian citizen on the basis of his/her gender, caste, creed, religion or place of birth and treats all citizens equally. In this context, the **Supreme Court decriminalized adultery in the Joseph Shine case** (2018) on the basis of equality of men and women.

#### Secularism in India addresses inter-religious domination in the following ways:

- **Reasonable restrictions on the freedom to practice religion:** While the Constitution provides for freedom to practice and profess a religion (Article 25), it imposes restrictions on this freedom, such as public order, health and morality. It also permits the state to **regulate secular activities linked to religious practices** to ensure balance.
- **Positive discrimination to religious minorities:** Indian secularism addresses inter-religious domination by providing community rights to religious minorities. E.g. *Article 30 commits the state to give aid to educational institutions established and administered by religious minorities*.

- **Accommodates personal laws:** Indian secularism allows personal laws to govern various secular aspects of life, such as marriage, divorce, succession, and adoption.

Indian secularism is deemed as multi-value secularism, which endorses state intervention to address both inter-religious and intra-religious domination to promote the Constitutional values of equality, liberty and justice. However, secularism cannot be sustained by the government alone and requires collective commitment from the judiciary, media, civil society, and citizenry.

**Highlights:**

**Secularism: intra-religious domination**

- **Addresses caste-based discrimination:** banning untouchability (Article 17)
- **Promotes gender justice:** Sabarimala judgment
- **Addresses discriminatory aspects of personal laws:** instant triple talaq declared unconstitutional.
- **Equality before law:** adultery decriminalized in the Joseph Shine case (2018).

**Secularism: inter-religious domination**

- **Reasonable restrictions on the freedom to practice religion**
- **Positive discrimination to religious minorities**
- **Accommodates personal laws**

**20. Do you agree with the view that Indian cities are turning into landscapes of stark inequality and social exclusion? What steps can be taken to make urban areas more egalitarian in India? (Answer in 250 words)**

**15**

***Approach:***

- In the introduction, provide a brief background about urbanization in India.
- Discuss how there is social inequality and exclusion in urban areas.
- Mention the steps needed to ensure egalitarian urban spaces.
- Conclude accordingly.

***Answer:***

Urbanization has driven economic growth and modernization in India. By 2035, it is projected that 43.2% of Indians will live in urban areas. However, despite its benefits, urbanization has also widened disparities, leading to inequalities and social exclusions.

**Inequality and social exclusion in urban areas:**

- **Mushrooming of slums:** Rapid growth in cities has led to a rise in slums, highlighting a significant disparity between economic expansion and social inclusion.
  - *E.g.: Greater Mumbai, Delhi NCR and Kolkata house around **42% to 55%** of their urban population in slums.*
- **Social hierarchy-based segregation:** Urban centres are increasingly replicating rural social structures, with residential segregation and identity-based discrimination remaining pervasive.
  - *E.g.: Marginalized communities like Dalits, Adivasis, and religious minorities are often confined to slums.*

- **Uneven availability of basic facilities:** The urban rich live in well-serviced areas with luxury housing, while a significant portion of the urban poor live in slums with inadequate access to essential services like clean water, sanitation and electricity.
  - E.g.: In 2023, out of the 8,000 community and toilet blocks in Mumbai, only 28% were connected to the municipal sewerage system.
- **Unequal access to opportunities:** Rich-poor divide is reflected in stark imbalances in educational facilities, employment opportunities, access to healthcare, etc. which restrict opportunities for developing human capital.
  - E.g.: North-East Delhi, one of the most densely populated districts, has only one school for nearly 2,763 students.

To address these challenges, a multifaceted approach is needed for ensuring egalitarian urban spaces:

- **Inclusive urban planning:** Urban spaces should be redesigned to eliminate exclusionary zones and integrate marginalized communities into the broader urban fabric, with robust protection against discrimination based on religion and caste.
- **Affordable quality housing:** Promoting the development of low-cost housing projects connected to city infrastructure and ensuring speedy completion of housing projects under Pradhan Mantri Awas Yojana-Urban (PMAY-U).
- **Upgrading informal/slum settlements:** Focusing on enhancing slums and seamlessly integrating them into the city's formal structure can elevate living standards and service accessibility.
- **Enhancing access to opportunities:** Creating better employment avenues and facilitating skill upgrades to boost the earning capacities of the urban poor and migrant populations.
  - E.g.: Implementing urban job guarantee schemes similar to MGNREGA, as done in Rajasthan.
- Creating egalitarian urban spaces helps reduce inequality (SDG 10), enhance sustainable cities (SDG 11), and promote inclusive societies (SDG 16).

#### Highlights:

##### **Social inequality and exclusion in urban areas:**

- **Mushrooming of slums:** Highlights disparity between economic expansion and social inclusion.
- **Social hierarchy-based segregation:** *Dalits, Adivasis, and religious minorities* are often confined to slums.
- **Uneven access to basic facilities:** Low-income households lack access to clean water, sanitation and electricity.
- **Unequal access to opportunities:** Stark imbalances in educational facilities and employment opportunities.

##### **Measures:**

- **Eliminate** exclusionary zones, **integrate** marginalized communities.
- Promote **low-cost housing** projects connected to city infrastructure.
- **Upgrading slums** and integrating them into the city's formal structure.
- Creating **better employment avenues** and facilitating skill upgrades.

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