

# OFFICERS' PULSE



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# Foreword

**Officers Pulse-In Depth provides detailed analyses of significant articles from a variety of sources including **The Hindu, Indian Express, Business Standard, Down To Earth, Yojana, Kurukshetra, and others**. These insights are extremely valuable for UPSC CSE Mains preparation. To ensure comprehensive preparation for both Prelims & Mains, we recommend studying Officers Pulse-In Depth along with Officers Pulse-Digest.**

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## 1) CREATIVE ECONOMY

*(GS-III: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment)*

### Definition and Background

- The **creative economy (also known as the orange economy)** is an evolving concept based on the **contribution and potential of creative assets to contribute to economic growth and development.**
- At the heart of the creative economy are the creative industries which can be defined as the cycles of creation, production and distribution of goods and services that use creativity and intellectual capital as primary inputs.
- According to the **United Nations Trade and Development (UNCTAD)** report on the creative economy, **Creative Economy Outlook 2024**, three sectors are the main contributors of the creative economy (2022): **software services (41.3%), research and development (30.7%), advertising, market research and architecture (15.5%).**
- As of 2024, India's creative industry is valued at \$30 billion and employs about 8% of the country's working population.
- Creative exports grew by 20% in the previous year, generating more than \$11 billion.

### Significance for India

- **Economic Development and Empowerment:** The creative economy, particularly through traditional crafts and sustainable tourism, contributes to local economic development.
  - It empowers vulnerable populations, such as women and young people, by promoting inclusive local economies.
  - Through initiatives like linking local producers to global markets via e-commerce and sustainable tourism, the developmental goals are pursued.
- **Employment Opportunities:** The creative economy is a key driver of job creation, particularly in sectors such as design, advertising, media, and performing arts.
  - In India, creative industries account for a significant portion of the workforce, employing about 8% of the working population.
  - This creates opportunities for youth and women, particularly as the sector continues to grow.
- **Market Integration and Exports:** India's creative economy has demonstrated substantial contributions through exports, particularly in creative goods and services.
  - The design segment alone represented a significant portion of creative goods exports. This positions India as an emerging player in the global creative economy.
- **Innovation through Creativity:** India's creative economy fosters innovation, from grassroots innovations like the 'mitti cool clay refrigerator' to more complex technological solutions.
  - Creative solutions rooted in local needs can be **scaled to solve global challenges**, such as climate adaptation and sustainable technology.
- **Cultural Transformation and Digitalization:** The integration of multimedia and telecommunications technologies in India has radically transformed how people create, consume, and enjoy cultural products.
  - The digitalization of creative industries, especially in areas like music, design, and video games, enables India to tap into global markets, contributing to the overall growth of the digital economy.
- **Sustainable Development Goals (SDGs):** The creative economy directly aligns with various Sustainable Development Goals (SDGs), such as decent work, economic growth, gender equality, and responsible consumption.

- India's focus on the creative economy supports SDGs like **SDG 4 (quality education)**, **SDG 5 (gender equality)**, **SDG 8 (decent work and economic growth)**, and **SDG 12 (responsible consumption and production)** .

### Challenges in promoting Creative Economy

- **Scaling Up Grassroots Innovations:** India has immense creativity but many grassroots innovations struggle to translate into large-scale innovations.
  - There is a gap between creative ideas and their formalization or commercialization.
- **Intellectual Property (IP) Protection:** Creative industries in India, in local and informal sectors, do not have proper intellectual property protection.
  - This results in the loss of potential revenue and hinders innovation, as creators are often unable to protect and utilise their ideas.
- **Limited Investment in Creative Sectors:** There is a shortage of targeted investment in creative sectors.
- **Digital Divide:** The digital divide remains a significant issue, particularly for women and marginalized groups. Many women face obstacles in accessing digital tools for artistic creation and distribution, limiting their participation in the creative economy.
- **Talent and Skill Gaps:** While the creative economy is rapidly growing, there is a shortage of skilled talent in the country in areas that require high levels of technical expertise, such as digital services and innovation.

### Way Forward

- **Strengthening IP Framework:** To encourage innovation and to protect creators, the Indian Government should focus on strengthening the intellectual property (IP) framework and ensure its effective enforcement.
  - This can include awareness campaigns, improving access to IP registration for grassroots innovators, and creating platforms to simplify the IP protection process for creative entrepreneurs.
  - Legal and policy reforms should aim at creating a more transparent, accessible, and efficient IP protection system.
- **Promoting Investment and Funding:** Targeted funding mechanisms should be developed to invest in creative sectors, especially at the grassroots level.
  - This can include establishing dedicated venture funds, grants, and incubators for creative entrepreneurs, and encouraging both public and private sector investments in local creative businesses.
  - India could also explore incentivizing global investors to participate in the country's creative economy by offering tax breaks or other benefits.
- **Digital Literacy:** Closing the digital divide is crucial to ensure equitable participation in the creative economy.
  - Government and private sector initiatives can focus on improving digital literacy through community centers, online courses, and collaboration with educational institutions to create a pool of skilled talent for the creative sector.
- The need of the day is an ecosystem that balances creativity and innovations at all levels, backed by investments to ensure that India's ambitions to improve creative economic conditions are met.

## 2) ARTIFICIAL INTELLIGENCE AND CHILDREN

*(GS-I: Role of Women and Women's Organization, Population and Associated Issues, Poverty and Developmental Issues, Urbanization, their problems and their remedies. Effects of Globalization on Indian society)*

### Background

- Artificial Intelligence (AI) systems are changing the world and are affecting the present and future generations of children.
- **Children** are already interacting with AI technologies in many different ways: through toys, virtual assistants, video games, and adaptive learning software.
- At present, little attention is paid to how AI systems will affect children and their rights. This is especially concerning, as children are less able to fully understand the implications of AI technologies and often do not have the opportunities to communicate their opinions, nor the right advocates to support them.
- Children also often lack the resources to respond to instances of bias or to rectify any misconceptions in their data.
- On the other hand, AI also provides many new opportunities for children.

### Opportunities for Children through AI

- **Personalized Learning Tools:** AI can modify educational content to each child's learning style, pace, and needs, improving educational outcomes and expanding access to quality education for children worldwide.
- **Health Innovations:** Through Big Data and AI, we can better understand and address childhood diseases, potentially leading to curing or managing illnesses like HIV and other conditions affecting children.
- **Enhanced Accessibility:** AI technologies, such as speech-to-text applications and brain-controlled robotic devices, can help children with physical, visual, or cognitive impairments access education, communication, and daily activities more easily.
- **Emotional and Mental Health Support:** AI-driven virtual therapists and emotional support networks can offer mental health assistance to children dealing with stress, trauma, or mental health challenges, particularly in areas with limited access to traditional therapy.
- **Safer Urban Environments:** AI can aid in urban planning (traffic management, waste management, pollution control) to make cities safer, healthier, and more supportive environments for the growing number of children living in urban areas.
- **Food Security and Nutrition through Smart Agriculture:** AI-powered Big Data analysis can optimize agricultural practices, ensuring better food production and distribution, leading to improved nutrition and food security for children, especially in vulnerable regions.

### Issues for Children due to emergence of AI

- **Identity Theft:** AI can be misused to create fake identities or steal personal information, putting children's digital identities and financial security at risk.
- **Exposure to Harmful Content:** AI-driven platforms may unknowingly expose children to inappropriate, violent, or harmful material, especially with the rise of generative AI.
- **Location Tracking and Targeting:** AI tools can detect and misuse children's location data, creating risks of stalking, abduction, or other forms of exploitation.
- **Bias and Discrimination:** AI-based decision-making (e.g., in education, healthcare, financial services) can reinforce historic biases, unfairly excluding children from opportunities.
- **Digital Divide:** Not all children have equal access to AI technologies, worsening existing inequalities between socio-economic groups.

- **Cognitive and Psychological Impacts:** Heavy reliance on AI for cognitive tasks could impair children's memory, critical thinking, and focus.
  - Increased screen time and AI-mediated interactions can lead to anxiety, depression, and poor social skill development.
  - AI algorithms (especially those used in advertising and social media) can manipulate children's behavior and choices without their informed consent.
- **Threat of AI-Generated CSAM (Child Sexual Abuse Material):** AI tools can create highly realistic fake images and videos of children, posing grave threats to their dignity and safety.
  - Existing laws in India (Information Technology Act, 2000; Protection of Children from Sexual Offences (POCSO) Act, 2012) are insufficient to tackle AI-generated CSAM, leaving children vulnerable.
  - The spread of AI-generated CSAM can cause deep emotional trauma for victims and their families.
- **Impact on Social Skills:** AI-mediated learning environments may limit real-world social interactions, affecting children's emotional and social development.
- **Reduced Physical Activity:** As AI handles more tasks, children might have fewer traditional work experiences, leading to issues around finding purpose and meaning in leisure.

### Way Forward

#### Government Perspective:

- **Promote Digital Literacy and AI Education Early:** Governments can integrate AI and digital skills into school curriculums to prepare children for the future workforce and help them use AI responsibly.
  - This should be done without urban-rural distinction to avoid the problem of digital divide.
- **Create Stronger Regulations and Safety Standards:** New legislations which ensure AI tools used by children are safe, free from harmful content, respect privacy, and are age-appropriate.
- **Develop Child-Safe AI Platforms:** Encourage the development of AI systems specifically designed for children's learning, health, and well-being, with strict ethical guidelines.

#### Parent Perspective:

- **Encourage Guided and Purposeful Use of AI:** Parents should help children use AI for learning, creativity (e.g., coding, art, language learning) rather than for passive consumption or entertainment alone.
- **Teach Critical Thinking about AI:** Parents should take steps to educate children to question and understand AI outputs (For instance; not believing everything a chatbot or Gen AI says).
- **Monitor and Set Healthy Boundaries:** Parents have to supervise children's use of AI tools, set screen time limits, and ensure they're interacting with trustworthy and safe AI platforms.

## 3) INDIA AS A SOLUTION TO ADDRESS GLOBAL LABOUR SHORTAGE

### (GS-I: Effects of Globalization on Indian society)

#### Background

- **High-income countries** are projected to face an **overall labour gap of 40-50 million** people by 2030 and this number may rise to 120-160 million by 2040.
- This gap spans various sectors, including industrial workers, healthcare professionals, teachers, engineers and researchers.

- The **US and Europe** are already experiencing **significant vacancies** in core sectors up to 73 per cent in **truck driver positions** and over 50 per cent for **electrical engineers, cleaners, construction workers, and nurses** in Europe.
- On the other hand, India has a large demographic surplus which is in need of gainful employment opportunities. This surplus can be used to address the gap of the High Income countries through proper and planned measures.

### Measures which India can take up to use this Opportunity

- **Institutional Framework for Overseas Employment:** India should strengthen the **central migration department** under the Ministry of External Affairs to oversee all aspects of international labor mobility.
  - **State-level migration departments** and embassy-based support desks should also be established to streamline recruitment, protect worker rights, and assist migrants abroad and upon return.
- **Skills and Certifications in Global Standards:** To enhance the employability of Indian workers abroad, India must integrate foreign languages and internationally relevant skills into its education and training systems.
  - **Mutual recognition agreements** and joint certifications with global institutions will ensure Indian qualifications are accepted and valued in foreign job markets.
- **Reduce Migration Costs:** The financial burden of migrating can cost from Rs 1–10 lakh and can be a major barrier for workers.
  - India should adopt financing models like the **Philippines' ESA-Pay system**, where employers or agencies cover key pre-departure costs such as visas, training, medical exams, and documentation.
- **Government-to-Government Agreements:** Bilateral labor agreements should aim to simplify visa procedures, promote cultural integration, and ensure recognition of Indian qualifications abroad.
  - **The Philippines** has signed over **65 such agreements** and India can try and follow this model to enhance worker protections and placement opportunities.
- **National Level Institutional Setup:** A dedicated industry body should be formed to regulate recruitment practices and represent India's overseas employment sector.
  - This organization can **set ethical standards, ensure compliance**, and work closely with the government to align workforce development with international requirements.
- **Migrant Welfare Framework:** India must safeguard migrant rights by ensuring fair wages, standard contracts, safe working and living conditions, and access to healthcare and legal aid.
  - This framework should follow **International Labour Organisation standards** and provide mechanisms for workers to report exploitation or contract violations.
- **Integration of Returning Migrants:** Migrants returning to India bring valuable global experience and skills that can **boost local development**.
  - The government should facilitate their reintegration through targeted programs, including career counseling, training, and financial support for entrepreneurship or re-employment.

### Way Forward

- A study among 71 low-income nations has revealed that a 10 per cent rise in remittances reduces poverty by 3.5 per cent.
- Transforming India into a global hub for labourers is not just an economic imperative but a strategic opportunity to channel the country's demographic dividend.

- By building a strong foundation for talent development and mobility, India can position itself as a leading supplier of skilled and semi-skilled professionals worldwide. This will **not only boost remittances but also enhance India's global influence and reputation.**

#### UPSC PYQs:

Discuss the changes in the trends of labour migration within and outside India in the last four decades. (2015)

## 4) TRUMPONOMICS AND ITS IMPACTS ON INDIA

*(GS-II: Effect of Policies and Politics of Developed and Developing Countries on India's interests, Indian Diaspora)*

### Background

- The **economic policies** of the United States of America under the Presidency of Donald Trump is generally referred to as **Trumponomics**.
- It is a mission to **fundamentally remake the American economy**. It rests on a few key propositions.
  - The first is that **America needs to bring back manufacturing**, lost to China and other economies over the past several decades.
  - A second key proposition of Trumponomics is that **free trade is not necessarily fair trade**. It is based on the belief that the fruits of free trade have benefited other countries more than the USA.
  - The third proposition is that America's **chronic trade deficits are unaffordable** as the flip side is foreigners using their trade surpluses to acquire more and more American assets.
- **Four elements** are proposed as **solutions** to address these propositions. Those are **tariffs, tax cuts, deregulation and more drilling of oil**.

### Positive Impacts on India

- **Strengthened Indo-Pacific Security Cooperation:** The Trump administration emphasized India's strategic role in the Indo-Pacific and increased **support for the Quad**, boosting India's regional influence against China.
- **Focus on Bilateral Trade Engagements:** The U.S. policy of shifting away from multilateral deals aligns with India's bilateral negotiation strategy, allowing specific trade discussions between the two nations.
- **Global Supply Chain Diversification Opportunities:** The U.S.-China trade war encourages American companies to diversify away from China, thus opening avenues for India to attract investment and become a manufacturing alternative.

### Negative Impacts on India

- **Increased Tariff Pressure:** The imposition of higher tariffs on Indian goods and threats of reciprocal tariffs has led to uncertainty for Indian exporters, especially in sectors like textiles, steel, and agriculture.
- **Immigration and Visa Policies:** Tighter H-1B visa rules and immigration policies under Trump hurt Indian tech professionals and IT firms, impacting one of India's most valuable export service sectors.
- **Global Trade Disruptions and Economic Slowdown:** The broader effects of Trump's trade wars disrupts global trade flows and supply chains. This may lead to slower global growth that indirectly affects India's export-driven sectors.

## Conclusion

- India has to navigate the Trump Administration's policies on trade and immigration and global security in a mutually beneficial manner.
- An equilibrium which benefits both the parties should be found at the earliest.

## 5) HEATWAVES AND ITS IMPACTS

*(GS-I: Important Geophysical Phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes)*

### Definition

- A Heat Wave is a period of **abnormally high temperatures**, more than the **normal maximum temperature** that occurs during the **summer season** in different parts of India.
- Qualitatively, a heat wave is a condition of **air temperature** which becomes **fatal** to the **human body** when exposed.
- Quantitatively, it is defined based on the **temperature** thresholds over a region in terms of actual temperature or its departure from normal.
- Heat Waves typically occur between **March** and **June**, and in some rare cases even extend till **July**.

### Criteria for Heat waves

- The **Indian Meteorological Department (IMD)** has given the following criteria for Heat Waves :
  - Heat wave is considered if the **maximum temperature** of a place reaches at least **40°C** or more for **Plains** and at least **30°C** or more for **Hilly regions**;
  - Based on **Departure from Normal**
    - Heat Wave: Departure from normal is 4.5°C to 6.4°C
    - Severe Heat Wave: Departure from normal is >6.4°C
  - Based on **Actual Maximum Temperature**
    - Heat Wave: When actual maximum temperature  $\geq 45^\circ\text{C}$
    - Severe Heat Wave: When actual maximum temperature  $\geq 47^\circ\text{C}$
  - For coastal regions, when **maximum temperature departure** is 4.5°C or more from normal, Heat Wave may be described provided the actual maximum temperature is 37°C or more.
- Higher **daily peak temperatures** and longer, more **intense heat waves** are becoming increasingly frequent globally due to climate change.

### Impacts of Heatwaves

- **Health Impacts:** Heat stress occurs when external temperatures rise close to or above the **human body temperature of 37°C**, making it difficult for the body to release internal heat.
  - This condition can affect vital organs such as the kidneys, liver, and brain, leading to heat-related illnesses or even death.
  - **Vulnerable populations including the elderly, women, migrants, the poor, and subsistence workers** are at greater risk of health complications due to heatwaves.
- **Socio-Economic Impacts:** Heatwaves **reduce the productivity** of outdoor workers, especially in labor-intensive sectors such as agriculture and construction.
  - The **loss of working hours** and jobs caused by heat stress significantly reduces the personal and family income of workers.

- Approximately 75% of India's workforce, or about 380 million people, are dependent on labor that exposes them to extreme heat.
- **Economic losses** due to heat stress are estimated to be between **3% to 5% of GDP** in India.
- **Increased electricity demand** during heat waves can lead to power outages, which in turn affect industrial output.
- Rising temperatures can lead to **livestock deaths and reduced agricultural yield**, further impacting food production and rural livelihoods.
- **Environmental and Infrastructure Impacts:** Urban areas experience higher temperatures than rural regions due to the **urban heat island effect**, which is largely driven by human activity.
  - **Poorly designed buildings and limited green spaces** worsen the effects of extreme heat in cities.
  - **Water scarcity** becomes more severe as the need for hydration increases during heatwaves.
  - **Healthcare systems** become **strained** with an increase in heat-related hospital admissions and emergencies.
- **Equity and Social Justice Impacts:** Marginalized communities are disproportionately affected by heatwaves due to limited access to resources and infrastructure.
  - **Women face added burdens** due to societal expectations such as cooking in hot kitchens, wearing culturally appropriate clothing, and limited access to comfortable sleeping arrangements.
  - **Standard heat advisories** such as "stay indoors" are not always practical for those living in cramped or poorly ventilated spaces in **urban slums**.

#### Measures to tackle the Heat wave challenge

- **Updation of Heat Action Plans (HAPs):** States should develop or revise their Heat Action Plans using best practices and lessons from existing plans.
  - Plans must include humidity, not just temperature, and be based on local vulnerability assessments.
  - Roles and responsibilities of stakeholders should be clearly defined. HAPs should be implemented from early March each year.
- **Heat-Related Data Collection and Use:** Accurate and comprehensive data on heat stress, related illnesses, and deaths must be collected and analyzed.
  - Interpreting existing data, even if incomplete, can provide insights into who is most affected and where they live.
  - **Data** should be used to **inform targeted** and potentially **life-saving interventions**.
- **Early Warning Systems:** Heat alert systems should include both daytime and nighttime maximum temperatures.
  - Forecasts should provide information on thermal comfort and identify cooler periods during the day.
  - Advanced warnings can help maintain school, office, and service operations safely.
- **Long-Term Preventive Measures:** Urban planning must incorporate heat-resilient infrastructure and climate-friendly building materials.
  - **Tree planting, creation of green spaces**, and the use of reflective surfaces should be expanded.
  - **Financial aid** should be considered for **informal sector workers** affected by heat-induced work loss.
- **Context-Specific Advisories:** Generic advice like "stay indoors" may not be suitable for residents of densely packed, poorly ventilated areas.

- Heat advisories must be tailored to **specific local conditions** and **vulnerable populations**.
- Cities should assess heat risk by geography and social context for better response planning.
- **Summer Shelters and Cool Roof Policies:** More cities should establish summer shelters to protect vulnerable populations during heatwaves.
  - States should implement and promote cool roof policies to reflect sunlight and reduce indoor heat.
  - Practical, science-based innovations should be encouraged to prevent heat-related
- **Basic Services and Flexible Work Arrangements:** Drinking water stations and access to electrolyte solutions like ORS must be made widely available.
  - Workplaces should allow **flexible hours**, including early morning or late evening shifts.
  - Municipalities should support **temporary closure of outdoor work** during peak heat hours.

### Conclusion

- With every passing year, in India and globally, the average temperature is rising. Therefore, the actions should be focused not just on short-term measures but also on **long-term strategies** to address the challenge of rising temperatures.
- Policymakers and planners should remember that the **approach** towards heatwave management has to be **people-centric**.

## 6) JUDICIAL REVIEW IN INDIA

*(GS-II: Indian Constitution—Historical Underpinnings, Evolution, Features, Amendments, Significant Provisions and Basic Structure)*

### Definition and Background

- Judicial review in India is a **process by which the Supreme Court and the High Courts of India examine, determine and invalidate the Executive or Legislative actions inconsistent with the Constitution of India**.
- The idea ensures the **Supremacy of the Constitution** over any law made by the Legislatures i.e. the Parliament and the State Legislatures.
- In a democratic country governed by a **written Constitution**, it is the Constitution which is supreme and sovereign. It is the duty of the Judiciary to interpret the Constitution and ensure its preeminence.
- The idea was adapted into the Indian Constitution from the American Constitution.
- Judicial review is not explicitly mentioned in the Constitution but is implied through various articles.
  - **Article 13:** Laws inconsistent with or in derogation of Fundamental Rights are invalid.
  - **Article 32:** Right to constitutional remedies (allows individuals to approach the Supreme Court directly for enforcement of Fundamental Rights).
  - **Article 226:** It empowers High Courts to issue writs for the enforcement of fundamental rights and for any other purpose within their jurisdiction.
  - **Article 131, 136, 141, 143:** Empower the judiciary in different contexts to interpret the Constitution.
- **Judicial review** has been declared as a **Basic Structure of the Constitution in the Kesavananda Bharati case**.

### Significance of Judicial Review

- **Ensures Constitutional Supremacy:** Judicial review reinforces the idea that the Constitution is the highest legal authority in India. It empowers the judiciary to strike down laws and actions that violate constitutional provisions.
- **Protects Fundamental Rights:** It acts as a **safeguard against laws and policies that infringe upon citizens' fundamental rights**. Courts can intervene when individual freedoms guaranteed by the Constitution are threatened.
- **Maintains Rule of Law:** Judicial review ensures that all actions by the government are subject to legal scrutiny.  
No authority is above the law, and every action must conform to constitutional principles.
- **Checks Abuse of Power:** It serves as a vital check on arbitrary, excessive, or unconstitutional use of power. This maintains balance among the legislative, executive, and judicial branches of government.
- **Strengthens Democracy:** By upholding constitutional values, judicial review promotes democratic governance and accountability. It builds public confidence in the justice system and protects the rights of minorities and individuals.

### Issues with Judicial Review Process

- **Judicial Overreach:** Sometimes courts are seen as **stepping into the domain of the legislature or executive**, making laws and policy decisions rather than just interpreting law. This violates the separation of powers and can be termed as Judicial activism or Judicial overreach.
  - In 2016, the Supreme Court ordered a ban on liquor shops within 500 meters of national and state highways to reduce road accidents.
  - Though well-intentioned, this was seen as policy-making, affecting state revenue and local governance without legislative input.
- **Lack of Accountability:** Judges enjoy wide powers under judicial review, but there is **limited institutional accountability or transparency** in how these decisions are made. This raises concerns about unchecked judicial authority and subjective interpretations.
  - The striking down of the National Judicial Appointments Commission Act (2015), which aimed to reform judicial appointments, was criticized for preserving the opaque collegium system.
- **Delays and Backlog:** Frequent use of judicial review, especially through PILs (Public Interest Litigations), adds to the already heavy case burden. It can delay the implementation of key policies and slow down governance.

### Conclusion

- Judicial review is an essential feature of the Indian Constitution that ensures that the laws passed by the legislature and the actions of the executive are in line with the Constitution.
- While the scope of judicial review is quite broad and it has some drawbacks in functioning, its important role in shaping the Indian legal system and protecting the rights of its citizens is beyond any doubt.

#### UPSC PYQs:

What was held in the Coelho case? In this context, can you say that judicial review is of key importance amongst the basic features of the Constitution? (2016)

## 7) RADICALISATION

*(GS-III: Linkages between Development and Spread of Extremism; Role of External State and Non-state Actors in creating challenges to Internal Security)*

### Definition

- Radicalization is generally defined as a process through which **an individual adopts an increasingly extremist set of beliefs and aspirations.**
- Radicalisation has been described as a four stage process:-
  - **Pre-radical:** A person joins or identifies with a group or organisation.
  - **Self-identify:** The person believes and accepts the beliefs and views held by the group or organisation.
  - **Indoctrination:** The person is groomed by the group or organisation pulling them further down the pathway.
  - **Violent Extremist activities:** The person becomes involved in committing violent and extremist acts.
- Radicalisation can take place not only through **physical meetings** but also through **online meetings**, sharing of indoctrinating content online or offline.

### Factors leading to Radicalisation

- **Structural motivators:** These include **repression, corruption, unemployment, inequality, discrimination, a history of hostility** between identity groups, external state interventions in the affairs of other nations, and so on.
  - **Marginalized ethnic or religious communities** (e.g., **Rohingya in Myanmar**) may become radicalized due to persistent inequality and lack of representation.
- **Individual incentives:** These include a **sense of purpose** (generated through acting in accordance with perceived **ideological tenets**), adventure, belonging, acceptance, status, material enticements, fear of repercussions by VE entities, expected rewards in the afterlife, and so on.
  - **Individuals rejected by peers** or society may feel embraced by extremist networks, which often provide a strong sense of identity.
  - Groups like **Al-Shabaab in Somalia** offer **monthly wages** and food, attracting impoverished recruits.
- **Enabling factors:** These include the presence of **violent extremist mentors** (including religious leaders and individuals from social networks, among others), access to radical online communities, social networks with violent extremist associations, access to weaponry or other relevant items, a comparative lack of state presence, an absence of familial support, and so on.
  - Founder of **Lashkar-e-Taiba, Hafiz Saeed** is an example of a **violent extremist mentor**. He uses **ideology, charisma, religious authority, and organizational infrastructure** to radicalize and mobilize individuals toward **terrorism**.

### Radicalisation as a cause for Terror Acts

- **Legitimization of Violence:** As individuals become more radicalized, they may increasingly see **violence as a legitimate means** to pursue ideological, political, or religious goals.
- **Justification of Terrorist Acts:** Radicalized individuals may come to **justify terrorism** as a necessary or honorable action in defense or promotion of their beliefs.
- **Non-Linear Path to Violent Action:** Radicalization is a **non-linear process**, meaning justification for violence can occur **before or after ideological commitment**, and may still result in **support or execution of terrorist acts**.

- **Socialization into Violent Ideologies:** Radicalization often involves **learning and socialization** into a worldview that endorses violence, which increases the likelihood of engaging in terrorism.
- **Influence of Recruiters and Enabling Factors:** Violent extremist recruiters exploit personal vulnerabilities, pushing radicalized individuals toward **active participation in terrorism**.
- **Trigger Events and Catalysts:** Radicalized individuals may **not act until a triggering event** (e.g., perceived injustice or a personal crisis) pushes them over the edge, resulting in violent or terrorist actions.

### Measures to Counter Radicalisation

- **Reforming Education:** Introduce peace education, empathy training, and conflict resolution into the school curriculum.
  - **Samagra Shiksha Abhiyan** scheme can be **expanded to include peace studies, media literacy, and ethics education**, especially in conflict-sensitive regions like Jammu & Kashmir.
- **Community-Level Youth Engagement:** Local youth councils involving teachers, social workers, reformed offenders, and police can be created to monitor and guide vulnerable youth.
  - **Rashtriya Yuva Sashaktikaran Karyakram (RYSK)** can be adapted into a preventive tool against radicalisation by involving local mentors and conducting outreach in sensitive districts.
- **De-Radicalisation using Digital media:** Mobile-friendly platforms that teach media literacy and help young users identify fake news, hate speech, and radical content should be developed.
  - **PM eVIDYA and DIKSHA Platforms** can integrate modules on digital hygiene, cyber ethics, and de-radicalisation education.
- **Economic Upliftment:** Economic alternatives to at-risk youth through skills training and job placement can pull them away from radicalisation.
  - **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** can be adapted to create custom skill centres to act as rehabilitation and redirection hubs for youth susceptible to radicalisation.
- **Mental Health Support and Emotional Resilience:** Mental health services should be made available at all levels to address trauma, identity crises, and emotional voids that extremists often exploit.
  - **National Mental Health Programme (NMHP)** can provide mental health professionals to work with schools and panchayats to identify and counsel at-risk youth and offer therapeutic interventions.
- **Adequate Funding:** There should be funds given to those who are closest to youth i.e, school principals, sports coaches, and local non-governmental organisation workers. They should be empowered with training and resources to lead real change at ground level..

### Conclusion

- The cure to extremists who arise within the territory of the country is not always a military operation. It could be cured by a good teacher, a timely mentor and a government that outlines a road map for its young and guides them in the right path.

### UPSC PYQs:

“The diverse nature of India as a multi-religious and multi-ethnic society is not immune to the impact of radicalism which is seen in her neighbourhood? Discuss along with strategies to be adopted to counter this environment. (2014)

## 8) PLASTIC EMISSION IN INDIA

*(GS-III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)*

### Background

- India is the biggest plastic polluter in the world releasing 9.3 million tonnes (Mt) annually. This is equivalent to around **a fifth of global plastic emission**.
- **Plastic emissions** are defined as **plastic waste material** that has **moved from managed** or mismanaged systems (in which waste is subject to a form of control, however basic contained state) **to the unmanaged system** (the environment; uncontained state) with no control.
- Plastics leave a **substantial carbon footprint** throughout their life cycle, accounting for 3.4 percent of global greenhouse gas emissions.
- Plastic waste is not just a solid waste management issue, but a chemical waste issue as well.
- Throughout the life cycle of plastics, especially when plastic waste is not scientifically managed, harmful chemicals are released into the air, water, and soil, posing severe risks related to the environment and human health.
- Plastics, especially **single-use plastic (SUP)** products are ubiquitous and therefore have severe environmental, social, economic, and health consequences.

### Issues in Plastic Waste Management in India

- **Inaccurate Data:** Official plastic waste figures are **underestimated**, as they often exclude **rural areas, open burning, and informal sector recycling**. There's also a lack of standardized methods for data collection across states.
- **Weak Infrastructure:** Most waste goes to **uncontrolled dumpsites**, which outnumber sanitary landfills **10:1**. **Rural areas**, governed by panchayats, often lack any formal waste collection or processing infrastructure.
- **Poor Integration with Infrastructure:** Urban and rural local governments are **not** consistently linked with key facilities like **Material Recovery Facilities (MRFs), recyclers, or EPR (Extended Producer Responsibility) kiosks**, which reduces efficiency in collection and segregation.
- **Non-compliance and Lack of Enforcement:** Environmental laws and waste management rules are **frequently violated** or remain on paper, with **no real enforcement** or follow-up.
- **Limited Accountability:** The **polluter pays principle** is **not fully implemented**. Many producers, importers, and brand owners (PIBOs) do not fulfill their EPR obligations, and **informal and illegal practices** like open burning persist unchecked.

### Government measures for Plastic Waste Management

- **Ban on Single-Use Plastics (SUPs):** The Government of India banned the manufacture, import, stocking, distribution, sale, and use of identified SUP items with low utility and high littering potential, effective from July 1, 2022.
- **Extended Producer Responsibility (EPR) Guidelines:** Under the Plastic Waste Management (Amendment) Rules, 2022, mandatory targets for plastic packaging recycling and use of recycled plastic content have been introduced for Producers, Importers, and Brand Owners (PIBOs).

- **Plastic Waste Management Rules (2016 and Amendments):** These rules enhance regulatory mechanisms by increasing plastic carry bag thickness standards, phasing out multilayered plastics, and ensuring proper labelling and registration of plastic production units.
- **Swachh Bharat Mission – Urban (SBM-U) 2.0 Initiatives:** Government has promoted source segregation, set up Material Recovery Facilities (MRFs), and aligned cleanliness protocols with plastic waste rules to encourage sustainable city-level plastic waste management.
- **Monitoring and Enforcement Mechanisms:** Online platforms like the National Dashboard for SUP elimination, CPCB Monitoring Module, and the CPCB Grievance Redressal App have been developed for tracking compliance and facilitating enforcement.

### Way Forward

- **Formalising Informal Recycling Sector:** Recognition and integration of Informal Recycling Sector into the formal waste management framework should be taken up to improve efficiency and ensure social protection for workers.
- **Compliance and Enforcement:** Establishment of well functioning institutional mechanisms ensures strict compliance. This should be backed with bans and guidelines, monitoring illegal production and use, and punishing erring stakeholders.
- **Eco-Design and Reusability:** Encouragement and support for industries to design durable, reusable, and easily recyclable plastic products to reduce waste generation and extend product life.
- **Recycling Infrastructure and Technology:** Investments into scalable, decentralized, and innovative recycling facilities in smaller towns can boost plastic waste processing capacity. This also provides for employment opportunities.
- **Circular Economy:** Provision of tax benefits, subsidies, and financial incentives to businesses adopting circular economy models should be taken up to popularise the concept.

## 9) SKILL INDIA MISSION: A DECADE OF TRANSFORMATION

*(GS-II: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment)*

### Skill India Mission

Launched in 2015, the Skill India Mission has emerged as a pivotal national initiative aimed at bridging India's skill gap by empowering youth with industry-relevant competencies, aligning with global trends, and positioning India as a global skill hub.

### Features of Skill India Mission

1. **Institutional Framework and Policy Reforms:**
  - The establishment of the **Ministry of Skill Development & Entrepreneurship (MSDE)** and the launch of the **National Skill Development Mission (NSDM)** streamlined skilling initiatives across ministries.
  - The **NEP 2020** and the **National Credit Framework (NCrF)** have further integrated vocational training with mainstream education, enabling flexible learning pathways and credit transfers.
2. **Industry Integration and Apprenticeships:**
  - Over 100 industry consultations, **Flexi MoUs**, and the **Dual System of Training** have ensured market-aligned curricula.
  - The **National Apprenticeship Promotion Scheme (NAPS)** and **Direct Benefit Transfer (DBT)** mechanisms have enhanced industry exposure and employability, benefiting over **42 lakh candidates**.
3. **Technological Transformation:**

- The **Skill India Digital Hub (SIDH)** has revolutionized skilling with AR/VR content, AI-driven career mapping, and **Digital Skill Cards**. These tools have facilitated training in **Industry 4.0 sectors** like AI, IoT, EVs, and green hydrogen.
4. **International Mobility and Global Recognition:**
    - India has entered into **bilateral agreements with 16 countries** and established **30 Skill India International Centres (SIICs)** to enable global workforce mobility.
    - India's rise to **13th** in the **WorldSkills Competition 2024** reflects global recognition of its skilling capabilities.
  5. **AI-Driven Skilling Ecosystem:**
    - The **National AI Mission** supports **AI skilling** across sectors with tech giants like **Google and Microsoft**.
    - AI skilling initiatives now extend to healthcare, finance, and manufacturing, preparing the workforce for future technologies.
  6. **Budgetary Support and Scheme Convergence:**
    - The **Union Budget 2024–25** allocated ₹8,800 crore to Skill India, along with innovative financing tools like **Skill Loans, Skill Vouchers, and Skill Impact Bonds (SIBs)**.
    - Over 170 central and state schemes have been digitally unified under SIDH, enhancing efficiency and accessibility.
  7. **Preserving Traditional Livelihoods and Inclusivity:**
    - Schemes like **PM Vishwakarma, PM-JANMAN** have revitalized traditional crafts and empowered tribal and rural communities, combining heritage preservation with livelihood creation.

## Conclusion

- The Skill India Mission stands at a critical juncture in shaping a Viksit Bharat @2047, with a renewed focus on technological integration, industry collaboration, and educational convergence. By building a globally competitive, inclusive, and future-ready workforce, India is set to emerge as the Skill Capital of the World.

## 10) ENHANCING SKILLS FOR INDIA'S EXPORTS

*(GS-II: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment)*

### Introduction

- Exports are a vital engine of economic growth, employment generation, and poverty reduction. India stands at a critical juncture where export-led development, supported by skilling, infrastructure, and technology, can transform its economic trajectory and global standing.

### Key Opportunities

- **Export Potential:** India has demonstrated resilience in non-petroleum exports, particularly in electronics, chemicals, pharmaceuticals, and engineering goods.
  - Rising global demand and the success of schemes like **Production Linked Incentive (PLI) scheme** have positioned India as a competitive exporter, with **merchandise exports crossing \$750 billion in FY25**.
- **Job Creation and Industrial Growth:** Export-oriented sectors offer significant employment potential, especially for youth. The surge in **mobile phone exports—from \$0.2 billion in FY14 to \$21 billion in FY25**—has deepened India's integration with global value chains and stimulated **industrial hubs in Tamil Nadu, Karnataka, and Uttar Pradesh**.

- **MSME Empowerment:** MSMEs contribute over **45% to exports** and generate substantial employment. Strengthening their access to finance, easing non-tariff barriers, and enhancing quality standards are pivotal to boosting their global competitiveness.
- **Digital and Technological Integration:** Emphasis on **AI, robotics, and smart manufacturing** under **Digital India and ONDC initiatives** is fostering product innovation and supply chain efficiency.

### Government Interventions

- **Infrastructure Development:** Upgradation of logistics through **Unified Logistics Interface Platform, geospatial data integration**, and improved air transport aims to reduce export costs.
- **Skill Development:** The **Skill India Mission** is being realigned with export and manufacturing needs, focusing on vocational training, digital skills, and youth employability to match international standards.
- **Export Promotion Mission:** With a ₹2,250 crore outlay, it targets cross-border financing, reducing trade frictions, and supporting sector-specific export strategies.
- **Brand India & R&D:** The government is enhancing the global profile of Indian goods via innovation parks, increased R&D spending, and mutual recognition agreements to meet global quality norms.

### Challenges

#### 1. Infrastructure Bottlenecks

- **Port Congestion and Limited Container Capacity:** Inadequate port handling capacity, outdated equipment, and bureaucratic delays increase turnaround time and logistics costs.
- **High Logistics Costs:** India's logistics cost stands at **13–14% of GDP** (vs. ~8% in developed economies), making exports less competitive.
- **Poor Last-Mile Connectivity:** Inconsistent road and rail infrastructure between production centers and ports hampers efficient goods movement.

#### 2. Sectoral Vulnerabilities and Overdependence

- **Heavy Reliance on Few Sectors:** A large share of exports comes from IT services, petroleum products, and select capital-intensive industries, making India vulnerable to global demand fluctuations.
- **Underperformance of Traditional Sectors:** Textiles, leather, and handicrafts have lost competitiveness due to outdated technology, lack of scale, and rising input costs

#### 3. MSME Constraints

- **Access to Finance:** Small exporters face limited access to working capital, export credit, and affordable finance, especially in post-pandemic recovery.
- **Compliance and Regulatory Burden:** High costs of meeting export documentation, standards, and quality certifications discourage MSMEs from entering foreign markets.
- **Technology and Skill Gaps:** Lack of awareness and capacity to adopt new technologies and global standards affect productivity and export readiness.

#### 4. Global Trade and Geopolitical Risks

- **Trade Protectionism:** Rising tariffs, anti-dumping duties, and localization measures from trading partners (e.g., **US, EU**) threaten market access.
- **Geopolitical Instability:** Conflicts (e.g., **Russia-Ukraine**) and tensions in the Indo-Pacific region disrupt trade routes and global supply chains.
- **Dependence on Chinese Imports:** India remains reliant on **Chinese raw materials** and intermediate goods, creating vulnerabilities in sectors like electronics and pharmaceuticals

#### 5. Non-Tariff Barriers (NTBs)

- **Stringent Quality and Sanitary Standards:** Exporters often struggle with foreign SPS/TBT norms (Sanitary and Phytosanitary / Technical Barriers to Trade).

- **Delayed Approvals and Testing:** Lack of internationally recognized testing labs and certification bodies causes delays and rejection of shipments.

#### 6. Environmental and Sustainability Norms

- **Stringent Environmental Rules:** EU Carbon Border Adjustment Mechanism (CBAM) and global ESG norms pose new compliance costs for Indian exporters.
- **Lack of Green Transition Roadmap:** Many industries lack a roadmap for decarbonization, affecting access to climate-conscious markets.

#### 7. Digital Divide and E-Commerce Gaps

- **Limited Global E-Commerce Integration:** Indian MSMEs are underrepresented on platforms like Amazon Global and Alibaba due to digital skill and infrastructure gaps.
- **Slow Adoption of Digital Trade Infrastructure:** While ONDC and Digital India initiatives exist, seamless cross-border digital trade is still evolving.

#### 8. Human Capital Mismatch

- **Skill Gaps:** Training programs are not always aligned with export-sector needs (e.g., electronics, AI-driven manufacturing, high-precision engineering).
- **Brain Drain:** Talented individuals often migrate to advanced economies for better opportunities, creating skill shortages in high-end manufacturing and R&D.

#### 9. Institutional and Policy Challenges

- **Policy Inconsistency and Delays:** Frequent changes in export incentives and lack of long-term trade strategy hinder investor confidence.
- **Weak Coordination:** Fragmented efforts among various ministries, state governments, and export promotion bodies dilute effectiveness.

#### Way Forward

- **Policy and Institutional Reforms:** Streamlined regulations, quality certification systems, and inclusive trade frameworks are essential.
- **Human Capital Development:** International collaborations for technology transfer and training alignment can make India a global talent hub, especially in IT, healthcare, and construction.
- **Sustainability and Diversification:** Export strategies must embrace environmentally sustainable practices, technological innovation, and sectoral diversification, such as promoting Makhana as a global superfood.

#### Conclusion

- India's vision of becoming a \$20 trillion economy and a global export leader hinges on synchronized efforts across skilling, infrastructure, innovation, and policy. A holistic approach involving digital transformation, MSME empowerment, and global cooperation can position India as a resilient and competitive force in global trade.

## 11) WATER MANAGEMENT THROUGH PANCHAYATI RAJ INSTITUTIONS

*(GS-III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)*

### Introduction

- With 97.1% of India's 24.25 lakh water bodies located in rural areas, Gram Panchayats (GPs) play a pivotal role in local water governance.

### Role of PRIs in Water Management

#### a. Constitutional and Institutional Backing

- The Eleventh Schedule includes water-related functions: agriculture, irrigation, fisheries, watershed development.
- PRIs manage water resources locally through Gram Sabhas, Standing Committees, and Village Water and Sanitation Committees (VWSCs).

### b. Community Participation

- Ensuring **inclusive decision-making, gender participation, and protection against encroachment.**
- Active involvement in **planning, execution, and monitoring** of water schemes.

### c. Participatory Irrigation Management (PIM)

- **Water User Associations (WUAs)** manage water distribution and farm-level irrigation.

### d. Village Level Water Budgeting

- **Water budget:** Estimation of water availability and demand at GP level. Helps develop **Water Source Sustainability Plans** for equitable and efficient water distribution.

## Major Government Initiatives Involving PRIs

### a. Jal Jeevan Mission

- Aims for **100% Functional Household Tap Connections (FHTC)** in rural India.
- Involves GPs and VWSCs in implementation and operation.

### b. Repair, Renovation & Restoration (RRR) Scheme

- Part of **PM Krishi Sinchayee Yojana (PMKSY)**, focuses on rejuvenating water bodies via PRIs.

### c. Atal Bhujal Yojana

- Focus on **sustainable groundwater management with community participation.**
- Disbursements linked to **Water Security Plans** and **efficient water practices** by GPs.

### d. MGNREGA

- At least **60% of funds for agriculture-related activities**, ~75% enhancing water security.
- **Natural Resource Management (NRM)** component includes **rainwater harvesting, pond construction**, etc.

## Challenges in PRI-led Water Management

- **Limited technical and human capacity** at the GP level.
- **Encroachments and legal ambiguities** over water bodies.
- Inadequate convergence and coordination among line departments.
- **Climate change**, population growth, and agricultural demand straining water resources.

## Strategic Solutions & Way Forward

### a. Empowerment and Capacity Building

- Strengthen **training and capacity building** of elected PRI representatives under Ministry of Panchayati Raj (MoPR).
- Use **digital tools** for data management, GIS mapping of water bodies, and water auditing.

### b. Convergence and Localisation of SDGs

- Localising **SDG 6: Clean Water and Sanitation** through PRI-led plans.
- Ensure **whole-of-government and whole-of-society** approach in water governance.

### c. Community Ownership and Awareness

- Promote **Jan Bhagidari (people's participation).**
- Encourage community groups to take up **O&M responsibilities** of water infrastructure.
- Campaigns to promote water conservation and awareness of water rights.

## Key Facts for Prelims and Mains

- **97.1%** of water bodies are in rural areas.
- **62.4%** of public water bodies are managed by **Panchayats.**
- **Ponds** constitute **59.5%** of total water bodies.
- **Water budgeting** is a planning tool that estimates the supply-demand gap for preparing sustainability plans.

## **MODEL QUESTIONS**

1. Define Creative Economy. Does India have any hurdles to overcome to achieve success in the creative economy? If so, explain how India can overcome those hurdles.
2. Artificial Intelligence is a double edged sword pointed against Children. Critically examine.
3. India has a vast demographic surplus but the Developed world faces labour shortage. Can India address this paradox? Analyse.
4. Analyse the impacts of Trumponomics on India in detail.
5. Define Heatwave. What is the criteria for declaration of a heatwave in a particular area? Suggest ways which can mitigate the impacts of Heatwaves.
6. Judicial review in India has helped uphold the Constitutional ethos in the country. Analyse Critically.
7. What do you understand by the term Radicalisation? Is it a cause for terror activities in the Country? Analyse.
8. Plastic Waste management in India is facing significant issues which could not be addressed by the measures taken over the years by the Central and State Governments. Discuss.
9. The Skill India Mission has evolved into a comprehensive skilling ecosystem that integrates technology, industry needs, and inclusivity. Critically examine the key transformations brought by the Mission and assess its role in shaping a globally competitive and future-ready Indian workforce.
10. India aspires to become a \$20 trillion economy through export-led growth. Evaluate the government's policy initiatives and the key impediments that must be addressed to achieve this vision.
11. Panchayati Raj Institutions play a critical role in grassroots water governance in India. Discuss their contributions, challenges, and the way forward for ensuring sustainable and equitable water management.

