



Ensuring Safety of School Children

For Prelims: [Supreme Court, Guidelines on School Safety and Security 2021](#), [National Commission for Protection of Child Rights \(NCPCR\)](#), [Right to Education \(RTE\) Act, 2009](#), [NISHTHA Program](#), [National Education Policy \(NEP\), 2020](#), [SDG 16](#), [E-Baalnidaan](#), [POCSO e-Box](#)

For Mains: Role of NCPCR in implementing guidelines on school safety and security 2021

Source: [HT](#)

Why in News?

Recently, the [Supreme Court](#) directed the implementation of the Centre's 2021 [Guidelines on School Safety and Security](#) in schools, following the sexual assault of two schoolgirls in Badlapur, Maharashtra.

- It also asked the [National Commission for Protection of Child Rights \(NCPCR\)](#) to monitor the implementation of the guideline.

What are Guidelines on School Safety and Security 2021?

- **About:** The **Ministry of Education (MoE)** has framed the guidelines to ensure **school management** is held **accountable** for the safety of children in schools.
 - It address critical issues including **security measures, staff responsibilities, and procedures** to prevent incidents of harm or abuse.
 - It is applicable to **all schools, including private schools**.
- **Purpose of the Guidelines:**
 - **Co-creation of a Safe School Environment:** Foster a **collaborative approach** among all stakeholders i.e., **students, parents, teachers, and school management** to create a safe and secure school environment.
 - **Awareness of Existing Acts, Policies, and Guidelines:** Making all stakeholders aware of the various **laws, policies, procedures, and guidelines** related to different aspects of child safety. E.g., [Juvenile Justice Model Rules, 2016](#), [Right to Education \(RTE\) Act, 2009](#) etc.
 - **Zero Tolerance Policy:** Enforce a "**Zero Tolerance Policy**" against any form of **negligence or misconduct** and the perpetrator must face strict consequences.
- **Three-pronged approach:**
 - **Accountability for Child Safety:** In **government and government-aided schools**, the **head of the school, teachers, and education administration** are held accountable for child safety.
 - In **private and unaided schools**, the responsibility lies with the **school management, principal, and teachers**.
 - **Whole School Approach:** The guidelines adopt a "**whole school approach**" by incorporating safety and security aspects into education itself.
 - This includes focusing on **health, physical, socio-emotional, psycho-social, and cognitive aspects** of child safety, ensuring a holistic view of student well-

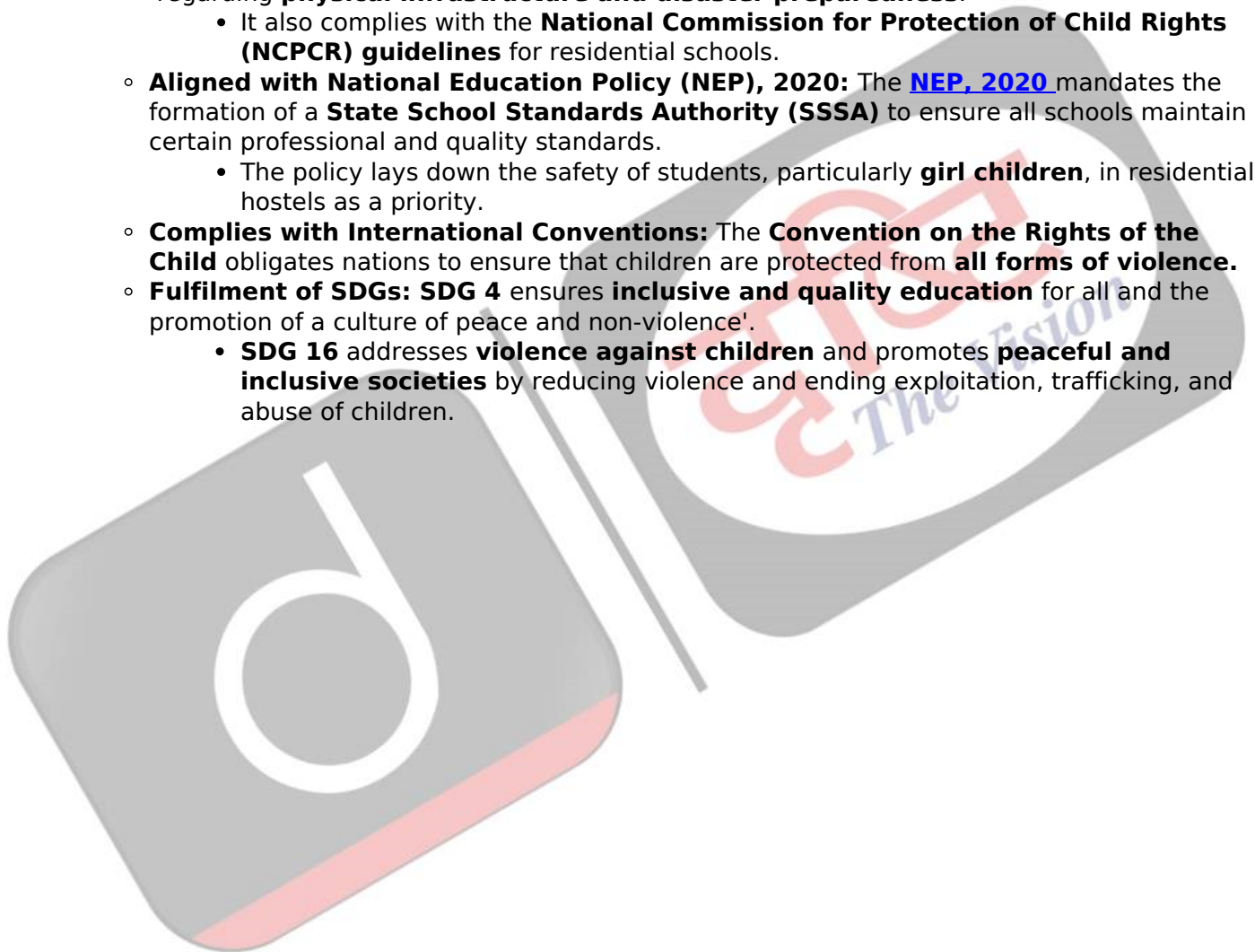
being.

- **Multi-Sectoral Concerns:** It integrates inputs and recommendations from **various ministries and departments** beyond the education sector. E.g., **health and hygiene protocols** by the Ministry of Health and Family Welfare.

▪ **Key Features:**

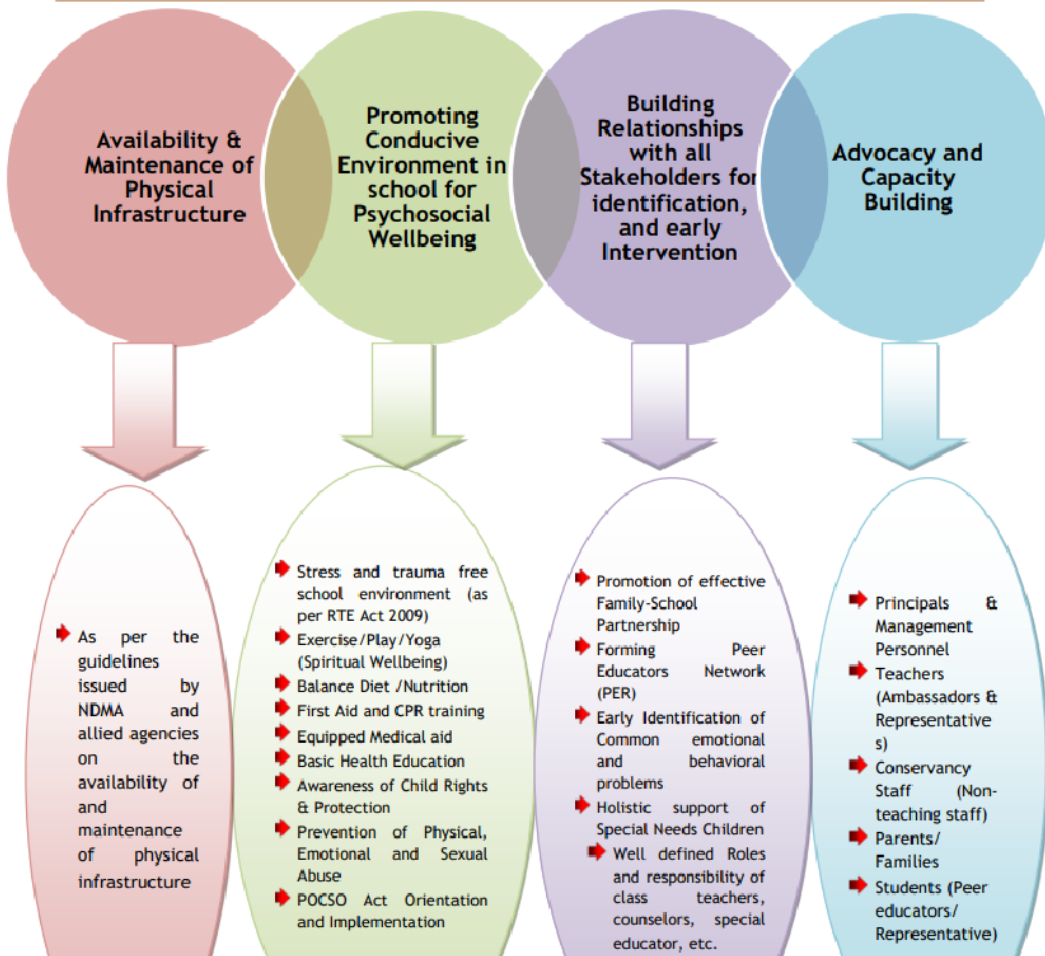
- **Teacher and Stakeholder Capacity Building:** It stresses the urgency of **sensitising, orienting, and building the capacity** of teachers, school heads, parents, and students to better manage safety protocols.
 - E.g., the [NISHTHA program](#) for elementary school teachers includes a special module on the educational response to [Covid-19](#).
- **Cybersecurity and Online Education:** It emphasises the importance of [cybersecurity](#) and [online safety](#) for children and teachers to adopt strong digital safety measures.
- **Compliance with Disaster Management and Safety Policies:** It aligns with the [National Disaster Management Guidelines on School Safety Policy, 2016](#) regarding **physical infrastructure and disaster preparedness**.
 - It also complies with the **National Commission for Protection of Child Rights (NCPCR) guidelines** for residential schools.
- **Aligned with National Education Policy (NEP), 2020:** The [NEP, 2020](#) mandates the formation of a **State School Standards Authority (SSSA)** to ensure all schools maintain certain professional and quality standards.
 - The policy lays down the safety of students, particularly **girl children**, in residential hostels as a priority.
- **Complies with International Conventions:** The **Convention on the Rights of the Child** obligates nations to ensure that children are protected from **all forms of violence**.
- **Fulfilment of SDGs: SDG 4** ensures **inclusive and quality education** for all and the promotion of a culture of peace and non-violence'.
 - **SDG 16** addresses **violence against children** and promotes **peaceful and inclusive societies** by reducing violence and ending exploitation, trafficking, and abuse of children.

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WHOLE SCHOOL APPROACH

EXAMPLE - FOR SAFETY AND PSYCHOSOCIAL WELLBEING



Best Practices:

- Nagaland has introduced a **9-month Diploma course in School Counselling** and has been designed and introduced from 2018 with the primary objective **to train teachers** in theory and practice of **School Counselling**.
- It **equips** educators and professionals with the necessary **skills and knowledge** to provide effective **counselling support** to students to enhance the **emotional and psychological well-being** of students.

NGOS Working for Children Welfare

- Bachpan Bachao Andolan (BBA):** It is India's **largest anti-trafficking and anti-slavery grassroots movement**. It was founded by **Nobel Peace Laureate Kailash Satyarthi in 1980** with a vision to protect and prevent children from all forms of exploitation.
- CRY (Child Rights and you):** They provide access to **free and quality education**, primary healthcare and **prevent violence, abuse, and exploitation** of children.
- Pratham:** Pratham is an **innovative learning organisation** created to improve the quality of education in India.
- Nanhi Kali:** It provides 360-degree support to **underprivileged girls from Class 1-10**, with the objective of enabling them to complete their schooling with dignity.

What is the Role of NCPCR in Ensuring Child Safety?

- **Monitoring Responsibility: NCPCR and SCPCRs (State Commissions for Protection of Child Rights)** are responsible for **monitoring the implementation** of the legal aspects of the guidelines related to **school safety and security**.
- **E-Baal Nidan:** NCPCR has a dedicated **Online Complaint System, "E-Baal Nidan"**, to ensure **timely redressal** of complaints of various violations and deprivation of child rights.
- **POCSO e-Box:** NCPCR has launched the **POCSO e-Box** for **easy and direct reporting** of sexual offences against children as well as timely action against the offenders under the **POCSO Act, 2012**.
- **Right to Education (RTE) Act, 2009:** Section 31 and Section 32 of **Right to Education (RTE) Act, 2009** assigns the NCPCR and SCPCRs the task of overseeing the **implementation of the RTE Act, 2009** including ensuring children's right to free and compulsory education.
- **Commissions for Protection of Child Rights (CPCR) Act, 2005:** Section 13(1) of **CPCR Act, 2005** entrusts the NCPCR and SCPCR to **inquire into complaints of child rights violations**, monitor the implementation of child protection laws etc.
 - NCPCR and SCPCR can take **suo-moto notice** of matter relating to **deprivation and violation** of child rights.
- **Juvenile Justice Act, 2015: Section 109** of the **Juvenile Justice Act, 2015** tasks the commissions with **monitoring the implementation** of the Juvenile Justice Act, 2015 for children safety.

Provisions of the Constitution for the Protection and Safety of Children

Provision	Rights
Article 14	Fundamental right to equality and equal protection of the law
Article 15 (3)	Fundamental right to special provisions
Article 21	Fundamental right to life and personal liberty
Article 21 A	Right to free and compulsory elementary education for all children aged 6-14
Articles 23 and 24	Fundamental right against exploitation
Article 39 (e)	Right to health and freedom from abuse due to economic necessity
Article 39 (f)	Right to development with dignity and guaranteed protection of childhood and youth against exploitation and moral and material abandonment
Article 46	Right of weaker sections to special educational care and protection from social injustice and all forms of exploitation
Article 47	Right to nutrition, standard of living, and improved public health
Article 51A (k)	Duty of parents or guardians to provide opportunities for education

Way Forward

- **Strict Compliance with NCPCR Guidelines:** Schools must strictly adhere to the **NCPCR's Manual on Safety and Security of Children in Schools**, identifying gaps in their safety protocols, and addressing them.
- **Safety Planning:** Each school should include a **School Safety and Security Plan** as a major component of their **School Development Plan (SDP)**.
- **In-Service Teacher Training:** Teachers should be sensitised to various safety issues, including

the Prevention of Child Sexual Offences (**POCSO Act, 2012**), and their responsibilities for reporting offences.

- Schools must report any offenses or suspicions related to child sexual abuse as per **Section 19** of the **POCSO Act, 2012**.
- **Anti-Bullying Committee:** Schools should establish **Anti-Bullying Committees** implement a **bullying (ragging) prevention program** and regularly discuss its effectiveness.
- **School Safety Week:** Schools should celebrate **School Safety Week** at the beginning of every academic session to review all safety arrangements.

Drishti Mains Question:

Discuss the measures needed for ensuring the safety and security of children in schools. What is the role of the National Commission for Protection of Child Rights (NCPCR) in implementing this?

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Mains

Q. Examine the main provisions of the National Child Policy and throw light on the status of its implementation. **(2016)**

Need for a Dedicated Witness Protection Law

For Prelims: [Supreme Court](#), Witness Protection Scheme 2018, [District and Sessions Judge](#), [Corporate Social Responsibility \(CSR\)](#), [Article 142](#), [United Nations Office on Drugs and Crime \(UNODC\)](#), [Malimath Committee \(2003\)](#), [Whistle Blowers Protection Act, 2011](#), [Right to be Forgotten](#).

For Mains: Need of a dedicated witness protection law for smooth function functioning of the criminal justice system.

Source: [PTI](#)

Why in News?

Recently, the [Supreme Court](#) expressed concern over the **lack of effective implementation** of the **Witness Protection Scheme, 2018**, highlighting the need for a **dedicated witness protection law**.

- The court made its observations while ordering a [CBI](#) enquiry in a case, in which the petitioner had **denied filing an appeal** and claimed that he had never hired any of the lawyers present in the court.

What are the Key Facts About the Witness Protection Scheme 2018?

- **About the Scheme:** It is a legal framework developed by the **Ministry of Home Affairs** to

protect witnesses involved in criminal cases.

- It was approved by the **Supreme Court** and became the **first-ever scheme** aimed at safeguarding witnesses from intimidation, threats, or harm.
- Protection measures include **changing the witness's identity, relocation, installing security devices**, and using specially designed courtrooms to safeguard witnesses during trials.
- **Definition of a Witness:** A witness is a person who provides **evidence or deposes** before a judicial tribunal.
 - Witnesses are crucial for the **criminal justice system** to function smoothly, and they must provide testimony freely and fairly.
 - The term "**witness**" is **not specifically defined** in the **Criminal Procedure Code, 1973 (CrPC or [Bharatiya Nagarik Suraksha Sanhita](#))**, but courts can summon anyone as a witness if their evidence is essential for deciding a case.
 - SC in **Ritesh Sinha vs State of UP Case** said that **being a witness**, in its ordinary grammatical sense, **means giving oral testimony in court**.
- **Categories of Witness:** The scheme identifies **three categories** of witnesses as per the **Threat Analysis Report (TAR)**.
 - **Category 'A':** Threat extends to the **life of** a witness or his family members.
 - **Category 'B':** Threat extends to **safety, reputation, property** of witness or his family members.
 - **Category 'C':** Threat is moderate and extends to **harassment or intimidation** of the witness or his family member's reputation or property.
- **Aims and Objectives of the Scheme:** The main objective is to ensure that witnesses are **not intimidated or frightened**, which could prejudice the investigation, prosecution, or trial of criminal offences.
 - It aims to promote law enforcement by helping the justice system function without **undue interference or threats** to witnesses.
- **Competent Authority for Witness Protection:** The **Competent Authority** is a **Standing Committee** established in each district, chaired by the **District and Sessions Judge**, with the District Police Head and the District Prosecutor as members.
 - This committee is responsible for **overseeing witness protection** measures in its jurisdiction.
- **State Witness Protection Fund:** A **State Witness Protection Fund** has been established to cover expenses incurred in implementing protection orders.
 - Funding sources include budgetary allocations, court fines, donations, and contributions from organisations under **Corporate Social Responsibility (CSR)** initiatives.
- **Types of Protection Measures:** Protection measures depend on the **threat level and are reviewed regularly**.
 - **Preventing face-to-face contact** between the witness and accused during the investigation or trial.
 - **Changing the witness's phone number** or installing **security devices** at their residence.
 - Concealing the witness's identity, providing escorts, **in-camera trials**, and holding trials in specially designed courtrooms.
 - Other specific protection measures can be requested by the witness or deemed necessary by the **Competent Authority**.
- **Review and Recovery of Expenses:** If a witness has lodged a **false complaint**, the State government may **recover the expenses** incurred for their protection.
- **Endorsement by the Supreme Court:** The Supreme Court, in **Mahender Chawla & Ors. v. Union of India & Ors. Case, 2018**, endorsed the Witness Protection Scheme and directed that it be **implemented by all States and Union Territories**.
 - The court ruled that the scheme should be considered "**law**" under **Articles 141 and 142 of the Constitution** until formal legislation is enacted.
 - **Article 141** states that the law declared by the Supreme Court shall be **binding on all courts** within the territory of India.
 - **Article 142** gives the Supreme Court the **power to pass orders or decrees** to ensure **complete justice** in any case or matter before it.

Why is the Witness Protection Scheme Ineffective?

- **Narrow Definition of Protected Offences:** The scheme **limits** protection to witnesses of crimes punishable by **death or life imprisonment** and specific crimes against women.
 - It excludes many other crimes that may pose significant risks to witnesses, thereby undermining the scheme's intent.
- **Issues with Witness Categorisation: Categorisation** of Witness into Category A (direct threat), Category B (threat to safety), and Category C (moderate threat) **lacks objective criteria** and relies on the subjective judgement of law enforcement officials, which may **not accurately reflect the true level of threat**.
- **Threat Assessment Report Concerns:** There is a **disconnect** between the threat perceptions of trained police officers and the **lived realities of ordinary citizens**, which can lead to underestimating the threats faced by witnesses.
- **Confidentiality of Witness Information:** The scheme fails to provide an enforcement mechanism to protect against **breaches of confidentiality**. The **porous nature** of the Indian legal system increases the risks of leaks, placing witnesses in precarious situations.
- **Comparison with International Standards:** International frameworks, including those by the [United Nations Office on Drugs and Crime \(UNODC\)](#), stress **comprehensive assessments** of witnesses, considering their psychological fitness and the significance of their testimony.
 - The Indian scheme's **focus solely on threats** overlooks the critical aspect of risk assessment.

What is the Need of a Dedicated Witness Protection Law?

- **Witnesses as the "Eyes and Ears of Justice":** English philosopher and jurist Jeremy Bentham famously remarked that "**witnesses are the eyes and ears of justice**".
 - The absence of legal obligations on the part of the State to protect witnesses leads to their reluctance in cooperating with the justice system.
- **Supreme Court Observations:** In the *State of Gujarat vs. Anirudh Singh case of 1997*, the **Supreme Court** held that it is the statutory duty of every witness who has knowledge of a crime to assist the State by providing evidence.
 - In the *Zahira Habibulla H. Shiekh vs. State of Gujarat case 2004*, the SC stated that fair trials are compromised if witnesses are threatened or forced to give false evidence.
- **Committee Recommendations:** The [Malimath Committee \(2003\)](#) on criminal justice reform reiterated that giving evidence is a **sacred duty**, as it helps the court discover the truth.
 - The **4th National Police Commission Report 1980** noted that witnesses often turn hostile under pressure from the accused, highlighting the urgent need for a strong witness protection law to preserve the **integrity of the justice system**.
- **Law Commission Reports: 154th, 178th, and 198th [Law Commission Reports](#)** discussed the witness protection issue and recommended the establishment of formal witness protection programs.
 - The 198th Report was specifically dedicated to **Witness Identity Protection and Witness Protection Programs 2006**.
- **Insufficient Protection: Section 195A of the Indian Penal Code ([Bharatiya Nyay Sanhita](#)), [Juvenile Justice Act \(2015\)](#), [POCSO Act \(2012\)](#), and [Whistle Blowers Protection Act, 2011](#)** provide safeguards for witnesses but are proved insufficient over time.
- **Extremism and Organised Crime:** The rise of extremism, terrorism, and organised crime has increased the need for witness protection, as their cooperation is crucial for law enforcement.

Conclusion

The inadequacy of witness protection measures in India is acknowledged. The Witness Protection Scheme 2018 is a **step forward but in early stages**. A **tiered model** with specialised units can enhance effectiveness. Integrating the [right to be forgotten](#) can protect witnesses' personal information, ensuring their rights and safety in the judicial process. Based on this a comprehensive witness protection law should be framed to uphold the integrity of the judicial process.

Drishti Mains Question:

Critically analyse the limitations of the Witness Protection Scheme, 2018 and account for the need of a dedicated witness protection law.

Plastic Waste Crisis in the Himalayan Region

For Prelims: [Himalayan region](#), [Extended Producer Responsibility](#), [Multi Layered plastics](#), [Microplastics](#), [Indus](#), [Ganga](#), [Greater Adjutant stork](#), [Landfills](#)

For Mains: [Solid Waste Management Rules, 2016](#), [Plastic Waste Management Rules, 2016](#), Plastic Waste Crisis in the Himalayan Region: Challenges, Consequences, and Sustainable Solutions

Source: [DTE](#)

Why in News?

The [Himalayan region](#), known for its pristine environment, is facing a growing [plastic waste](#) crisis. Since 2018, “**The Himalayan Cleanup (THC)**” movement has brought volunteers together annually to clean up waste and audit the collected trash to understand its sources.

- A crucial part of addressing this issue is **implementing [Extended Producer Responsibility \(EPR\)](#)**, which holds manufacturers accountable for their products' lifecycle, encouraging them to minimise waste and adopt sustainable practices to support local cleanup efforts.

Note: **The Himalayan Cleanup (THC) is the biggest campaign** addressing plastic pollution in the mountains. Each year, **THC identifies the top polluting companies and demands accountability**. The campaign encourages individuals, organisations, waste managers, and policymakers to take action against the plastic crisis.

What is the Extent of the Plastic Waste Crisis in the Himalayan Region?

- **Waste Generation:** [Solid waste generation \(SWG\)](#) in the Himalayas varies based on factors such as [urbanisation](#), [tourism](#), and [household income levels](#).
 - A large portion of the **waste is [biodegradable](#)**, coming from households, markets, and hotels. However, **plastic waste is predominant in tourist areas**.
 - Tourist hotspots generate a significant amount of **plastic waste**. **Waste management in the Himalayan region** is severely inadequate, despite the importance of these ecosystems.
- **Plastic Waste:** Plastic pollution has reached even the **remotest parts of the mountains**, with no systems in place to bring the waste back down for recycling or disposal.
 - Only about 25% of collected plastic waste consists of Polyethylene Terephthalate (PET), High-Density Polyethylene (HDPE), and Low-density polyethylene (LDPE), which are **categorised as recyclable**, while the **majority (75%) is non-recyclable**. [Multi-layered plastics \(MLP\)](#) pose an added challenge as they are non-recyclable and difficult to manage.
 - [Microplastics](#), formed by the degradation of larger plastic items, have been found

in **Himalayan glaciers, rivers, lakes, and even in human tissues.**

- The main contributors to plastic waste are plastics generated from **top food brands, smoking and tobacco brands, and personal care products.**


































Note: India is one of the **world's largest contributors to plastic pollution**, generating around **9.3 million tonnes of plastic waste annually**. This accounts for nearly **20% of the global total**.

- The rapid urbanisation, population growth, and economic development have led to increased use of single-use plastics and packaging materials.
- A report by **Swiss non-profit EA Earth Action** reveals that **India, along with 11 other countries, is responsible for 60% of the world's mismanaged plastic waste.**
 - India ranks 4th in the **Mismanaged Waste Index (MWI) 2023**, with 98.55% of generated waste being **mismanaged and fares poorly in the management of plastics waste**, according to the EA report.
 - MWI is the ratio of the mismanaged waste and the total waste.

THE 7 TYPES OF PLASTICS

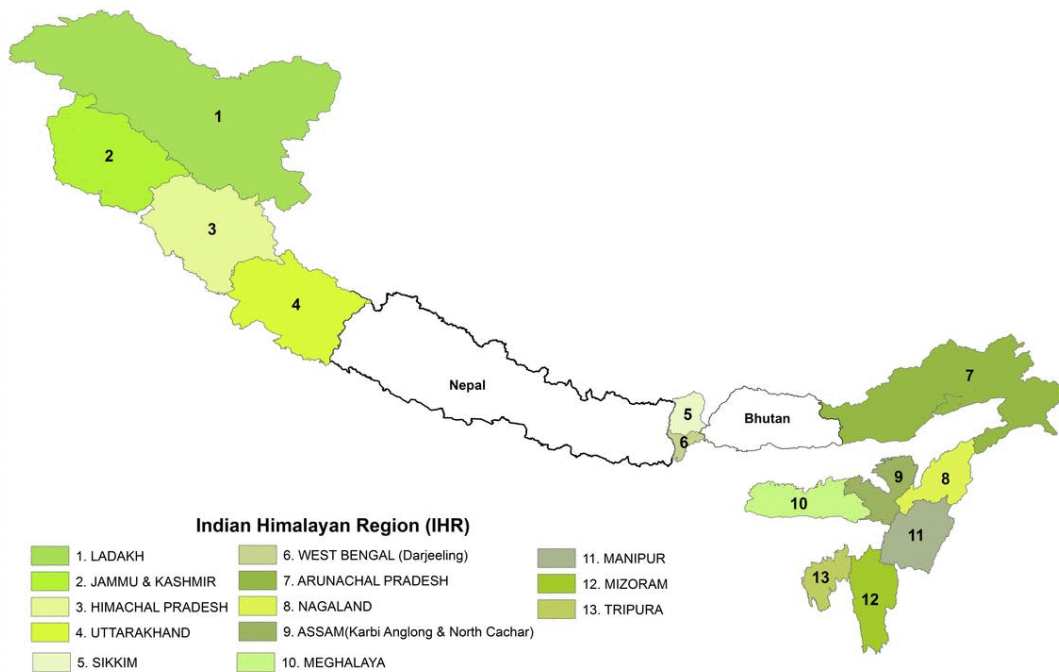
THEIR TOXICITY AND WHAT THEY ARE MOST COMMONLY USED FOR

TOXICITY CODE:  LOW  HIGH

Polymer Name	POLYETHYLENE TEREPHTHALATE	HIGH-DENSITY POLYETHYLENE	POLYVINYL CHLORIDE	LOW-DENSITY POLYETHYLENE	POLYPROPYLENE	POLYSTYRENE	All other plastics, including acrylic, fiberglass, nylon, polycarbonate, and poly(lactic acid) (a bioplastic)
Resin Identification Code							
Abbreviation	PET or PETE	HDPE	PVC	LDPE	PP	PS	OTHER
Recyclable?	Commonly Recycled	Commonly Recycled	Sometimes Recycled	Sometimes Recycled	Occasionally Recycled	Commonly Recycled (but difficult to do)	Difficult to Recycle
Percentage Recycled Annually							
How Long to Decompose Under Perfect Conditions	5-10 Years	100 Years	Never	500-1,000 Years	20-30 Years	50 Years	Majority of these plastics: never Polylactic acid: 6 months
Maximum Temperature	 70°C (158°F)	 120°C (248°F)	 70°C (158°F)	 80°C (176°F)	 135°C (275°F)	 90°C (194°F)	Polycarbonate: 135°C (275°F) Polylactic acid: 150°C (302°F)
Brittleness Temperature	 -40°C (-40°F)	 -100°C (-148°F)	 -30°C (-22°F)	 -100°C (-148°F)	 0°C (32°F)	 -20°C (-4°F)	Polycarbonate: -135°C (-211°F) Polylactic acid: 60°C (140°F)
Toxicity Level							
Most Commonly Leached Toxin(s)	Antimony Oxide, Bromine, Diazomethane, Lead Oxide, Nickel Ethylene Oxide, and Benzene	Chromium Oxide, Benzoyl Peroxide, Hexane, and Cyclohexane	Benzene, Carbon Tetrachloride, 1,2-Dichloroethane, Phthalates, Ethylene Oxide, Lead Chromate, Methyl Acrylate, Methanol, Phthalic Anhydride, Tetrahydrofuran, and Tribasic Lead Sulfate, Mercury, Cadmium, Bisphenol A (BPA)	Benzene, Chromium Oxide, Cumene Hydroperoxide, and Tert-butyl Hydroperoxide	Methanol, 2,6-di-tert-Butyl-4-Methyl Phenol, and Nickel Dibutyl Dithiocarbamate	Styrene, Ethylbenzene, Benzene, Ethylene, Carbon Tetrachloride, Polyvinyl Alcohol, Antimony Oxide, and Tert-butyl Hydroperoxide, Benzoquinone	BPA, BPS, as well as all other toxins mentioned

Indian Himalayan region

- It refers to the mountainous area in India that encompasses the entire **Himalayan range within the country**. It stretches from the northwestern part of India in Jammu and Kashmir to the northeastern states along the border with countries like Bhutan, Nepal, and Tibet (China).
- The Indian Himalayan Region is spread across **13 Indian States/Union Territories** (namely **Jammu and Kashmir, Ladakh, Uttarakhand, Himachal Pradesh, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Assam and West Bengal**), stretching across 2500 km.



What are the Consequences of Poor Plastic Waste Management?

- **Environmental Degradation:** Open dumping of waste not only tarnishes the scenic beauty of the mountains but also leads to **air and soil pollution**, and **destabilises mountain slopes**.
- **Impact on Water Sources:** The Himalayan region is vital for the water supply of major Indian rivers like the **Indus, Ganga**, and **Brahmaputra**. Unscientific disposal of plastic waste is **polluting these water sources** and harming biodiversity.
- **Biodiversity at Risk:** Wildlife, such as the **Greater Adjutant stork in Assam**, is reportedly consuming plastic waste instead of their natural diet.
- **Public Health Threats:** Pollution from mixed waste in **landfills** poses health risks to local communities and disrupts ecosystems.

What are the Challenges of Waste Management in the Himalayas?

- **Harsh Terrain and Climate:** The remote and rugged landscape, combined with **harsh climatic conditions**, makes waste collection and disposal more challenging than in urban areas.
 - **Segregation at source, collection, and waste transport** remain major challenges in Himalayan states.
 - Most waste is collected and dumped in landfills or rolled downhill, exacerbating the pollution problem.
- **Limited Infrastructure:** The availability of **land for waste treatment and disposal** is limited, and infrastructure for handling solid waste is often weak or non-existent.
 - The practice of **centralised dumping is still widespread**, and the infrastructure for recycling is lacking.
- **Regulations and Data Gaps:** There is **insufficient data on the volume and types of waste generated** in the Himalayan settlements, making it harder to manage waste effectively.
 - Despite existing regulations under the **Solid Waste Management Rules, 2016** and **Plastic Waste Management Rules 2016**, the pace of implementation has been slow.
- **Lack of Awareness:** Local communities are aware of the link between waste management and environmental health but **lack knowledge about proper disposal practices**.

What are the Concerns Regarding the EPR in the Himalayan Region?

- **Limited Implementation:** The EPR framework, anticipated to address plastic pollution, has seen **minimal implementation in the Himalayan states**. Local bodies **exhibit low awareness of EPR**, hampering effective operationalization.
- **Non-Recognition of Local Context:** Current EPR rules do not adequately account for the specific needs and conditions of mountain communities, ignoring factors such as **population density, local economies, and environmental fragility**.
 - The **one-size-fits-all approach fails to recognize the ecological significance and challenges faced in the Himalayas**.
- **Geographical Challenges:** The mountainous terrain presents unique challenges in waste collection, aggregation, and transportation, making traditional EPR models difficult to apply.
 - Inaccessible regions exacerbate issues of waste management, leading to an accumulation of litter.
- **Insufficient Producer Responsibility:** The burden of waste management has **largely fallen on consumers and waste managers**, with **producers not being held adequately accountable** for the lifecycle of their products.
 - There is a persistent lack of mechanisms for producers to take responsibility for waste generated from their products, particularly in remote areas.

Legal Mandate for Waste Management in the Himalayan Region

- **National Regulatory Framework:** The **Solid Waste Management (SWM) Rules 2016**, **Plastic Waste Management (PWM) Rules 2016**, and [Extended Producer Responsibility \(EPR\) 2022](#) form India's framework for plastic waste management.
- **Acknowledgment of Hill Areas:** The SWM recognizes the special needs of hill areas, but this is not adequately reflected in the mandates for local bodies and Producers, Importers, and Brand Owners (PIBOs).
- **State Specific Initiatives and Regulatory Efforts:**
 - **Himachal Pradesh:** Enacted state laws banning certain plastics and introduced a buyback policy for **non-recyclable and single-use plastics** in 2019, though littering remains an issue.
 - **Sikkim:** Banned **packaged mineral water** in January 2022 and developed a robust regulatory system, yet struggles with inadequate infrastructure for plastic waste management.
 - **Tripura:** Enacted municipal by-laws and formed a state-level task force to combat single-use plastics, but results are limited.

Way Forward

- **Local Adaptation of EPR Rules:** Modify the **Extended Producer Responsibility Rules (2022)** to suit the unique challenges of waste management in mountainous regions.
 - Engage local bodies in the development and enforcement of EPR regulations to ensure they are practical and effective. Provide **incentives for manufacturers to adopt sustainable practices** and take responsibility for their packaging and waste.
- **Implement Zoning Regulations:** Similar to the [National Green Tribunal's \(NGT\)](#) classification of [Nainital into prohibited, regulated, and development zones](#), the Himalayan region should establish designated areas that dictate the extent of **permissible activities to mitigate environmental impact** and promote responsible development.
- **Empowering Mountain Communities:** To tackle the waste crisis in the Himalayas, **encouraging local agriculture** is vital for reducing reliance on packaged goods that generate plastic waste. **Community-supported agriculture (CSA)** can foster partnerships between consumers and local farmers, enhancing access to fresh produce.
 - Furthermore, **educational initiatives will inform communities about the benefits of local foods** over processed options, supporting effective waste management and overall well-being.
- **Phased Implementation:** A systematic, **multi-tiered approach is needed**, with the government and partners managing institutional capacity, policymaking, enforcement,

and **technological advancements** in solid waste management.

- **Improved Data Collection:** More data on **waste generation and management in mountain areas** is essential to address bottlenecks and design effective solutions.
- **International Best Practices:** Case studies such as **South Korea's transformation of the Nanjido Island dump into an eco-park** can inspire strategies for eco-restoration and improved SWM practices in the Himalayas.

Drishti Mains Question:

Discuss the impact of plastic waste management practices on biodiversity and public health in the Himalayan region. How does this reflect the broader challenges faced by fragile ecosystems?

UPSC Civil Services Examination, Previous Year Questions (PYQ)

Prelims

Q1. Why is there a great concern about the 'microbeads' that are released into environment? (2019)

- (a) They are considered harmful to marine ecosystems.
- (b) They are considered to cause skin cancer in children.
- (c) They are small enough to be absorbed by crop plants in irrigated fields.
- (d) They are often found to be used as food adulterants.

Ans: (a)

Q2. In India, 'extend producer responsibility' was introduced as an important feature in which of the following? (2019)

- (a) The Bio-medical Waste (Management and Handling) Rules, 1998
- (b) The Recycled Plastic (Manufacturing and Usage) Rules, 1999
- (c) The E-Waste (Management and Handling) Rules, 2011
- (d) The Food Safety and Standard Regulations, 2011

Ans: (c)

Periodic Labour Force Survey (PLFS) Report 2023-24

For Prelims: [National Statistical Office \(NSO\)](#), [Periodic Labour Force Survey \(PLFS\)](#), [Formal Jobs](#), [Reverse Migration](#), [Informalisation](#), [Automation](#), [Digitisation](#), [Goods and Services Tax \(GST\)](#), [MSMEs](#), [Green Jobs](#).

For Mains: Status of employment in India, Challenges associated with creation of formal jobs.

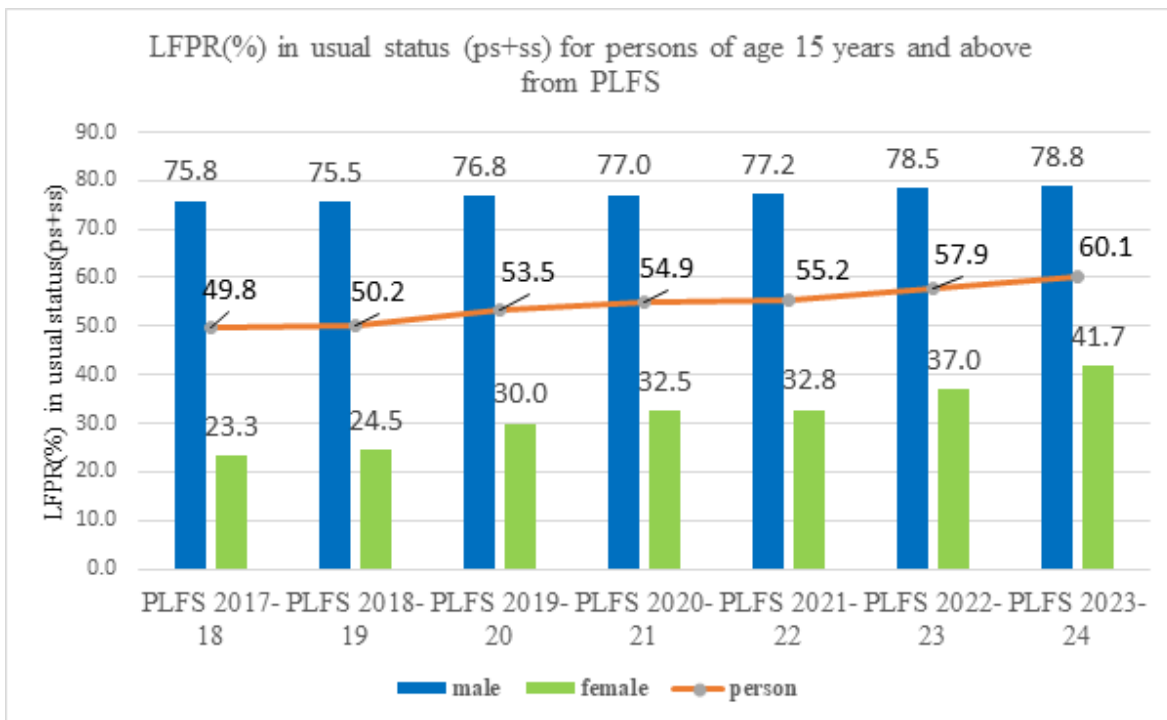
Source: [BS](#)

Why in News?

Recently, the [National Statistical Office \(NSO\)](#) released the annual [Periodic Labour Force Survey \(PLFS\) report 2023-24](#), showing the unemployment rate **stagnated at 3.2%** that raises concerns about the inability to **generate enough formal jobs**.

What are the Key Highlights of the PLFS report 2023-24?

- **Stagnant Unemployment Rate:** The **unemployment rate for 2023-24** remained unchanged at **3.2%**, the same as in 2022-23.
 - This marks the **first time** since the inception of the PLFS in **2017-18** that the unemployment rate has **not shown a year-on-year decline**.
- **Labour Force Participation Rate (LFPR):** It showed a **significant increase** in LFPR to **60.1% in 2023-24 from 57.9% in 2022-23** at national level.
 - The **rural LFPR rose to 63.7%**, while the **urban LFPR increased to 52%**. It suggests more people are seeking work in rural areas, possibly due to **reverse migration** or limited urban job opportunities during and after the pandemic.
 - LFPR represents the share of people **either working or seeking work** in the population.
- **Increasing Trend in Worker Population Ratio (WPR):** WPR was **58.2%** in the year 2023-2024. The same for **male and female** was **76.3% and 40.3%** respectively.
 - WPR is defined as the percentage of employed persons in the population.
- **Marginal Improvement in Job Quality:** There was a marginal improvement in job **quality**, with the share of **salaried or regular wage workers** increasing by **0.8** percentage points to **21.7%**.
- **Urban and Rural Divergence:** The unemployment rate in rural areas showed a slight increase, rising to **2.5%** in 2023-24 from **2.4%** in 2022-23.
 - In contrast, the **urban unemployment rate** improved, falling to **5.1%** from **5.4%**.
- **Gender Disparity:** The **unemployment rate for women rose to 3.2%** (up from 2.9% in 2022-23), while for **men**, it slightly **decreased to 3.2%** from 3.3%.
- **Increase in Self-Employment and Unpaid Work:** The share of people engaged in self-employment, including unpaid household work and small businesses, increased to **58.4%** from **57.3%** in 2022-23.
 - Self-employment includes both **entrepreneurial ventures and precarious informal work**, making it a mixed indicator of job quality.
- **Challenges in Creating Decent Jobs:** The inability of the economy to generate enough **decent jobs** is pushing more people into **self-employment**, often in the informal sector or unpaid family roles.
 - The share of **wage employment** remains significantly lower than in the pre-pandemic period, highlighting the difficulty in creating formal and secure jobs.



What are Key Facts About the PLFS Report?

- **About:** It is conducted by the NSO under the [Ministry of Statistics and Programme Implementation \(MoSPI\)](#) to measure the employment and unemployment situation in India.
 - It was developed to address the limitations of earlier labour force surveys conducted by the [National Sample Survey Office \(NSSO\)](#).
- **Two Primary Objectives of PLFS:** It was designed with **two major objectives** for measuring employment and unemployment:
 - **First Objective:** To measure the **dynamics of labour force participation and employment status** at short intervals (every three months) for **urban areas** using the **Current Weekly Status (CWS)** approach.
 - **Second Objective:** To measure **labour force estimates** for both **rural and urban areas** using the **Usual Status** and **CWS** parameters.
- **Innovations in Sampling Design and Data Collection:** The PLFS introduced **changes in the sampling design** and the **structure of the schedule of inquiry** compared to the previous quinquennial surveys conducted by the NSSO.
 - The PLFS also included **additional data**, such as the **number of hours worked**, which was not collected in the earlier **quinquennial** rounds of the NSSO.

What are Government's Initiatives Related to Employment?

- [Support for Marginalised Individuals for Livelihood and Enterprise \(SMILE\)](#)
- [PM-DAKSH \(Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi\)](#)
- [Mahatma Gandhi National Rural Employment Guarantee Act \(MGNREGA\)](#)
- [Pradhan Mantri Kaushal Vikas Yojana \(PMKVY\)](#)
- [Start-Up India Scheme](#)
- [Rozgar Mela](#)

Why India Struggles to Generate Enough Formal Jobs?

- **Increasing Informalisation in Employment:** The rise in employment in **agriculture, and construction** is tied to increased informalisation.
 - As these are generally **unprotected by labour laws**, with no access to social security, or

job security.

- **Technological Advancements:** The introduction of **AI and IoT** threatens job prospects for even **skilled workers**, further complicating the employment scenario. There is growing concern that **automation and digitisation** will reduce labour demand.
 - Examples, such as layoffs in IT firms shows **automation** can reduce job opportunities, even for skilled workers.
- **Growing Jobseekers:** The **increase in educated job seekers**, particularly those with graduate degrees, raises concerns about the **availability of suitable jobs**, as the demand for such employment appears to be **shrinking**.
- **Policy Missteps:** Policy like **demonetization in 2016** and the poorly implemented **Goods and Services Tax (GST) in 2017** have adversely affected **MSMEs**, leading to a further decline in job creation which employs most of **India's workforce**.
- **Stagnant Service Sector:** The output share of sectors like **transport, storage, communication, and financial services** remained steady but their employment share dropped from **6% to 5%, with financial services falling below 1%**.
- **Skill Mismatch:** Despite the government's focus on skilling, the share of workers in skilled jobs fell from **18% in 2018-19 to 14% in 2022-23**.
 - This, along with **widening inequality** and a **declining worker-to-population ratio** highlights the growing unemployment challenges.

Way Forward

- **Sectoral Diversification:** Investments in **manufacturing, renewable energy, and technological innovation** can create jobs with greater productivity and higher wages.
- **Strengthening MSMEs:** Micro, Small, and Medium Enterprises (MSMEs) need **targeted financial support**, tax relief, and a **streamlined regulatory environment** to help them recover and expand their employment capacity.
- **Human-Centric Tech Adaptation:** Emphasis should be placed on encouraging innovation in sectors that have **high labour absorption capacity**, such as renewable energy, healthcare, and sustainable manufacturing, which are less likely to be fully automated.
- **Industry-Aligned Skill Development:** The government's skilling initiatives should be aligned with **current and future industry needs** and include training in **emerging fields** such as **green jobs, AI ethics, cybersecurity, and data analytics**.
- **High-Potential Service Sectors:** The focus should also be on encouraging the growth of **new-age services** like **e-commerce, logistics, and online education**, which have the potential to generate employment for a variety of skill levels.

Drishti Mains Question:

Despite economic growth, why does India struggle to generate enough formal jobs for its population, suggest measures.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Increase in absolute and per capita real GNP do not connote a higher level of economic development, if(2018)

- (a) industrial output fails to keep pace with agricultural output.
- (b) agricultural output fails to keep pace with industrial output.
- (c) poverty and unemployment increase.
- (d) imports grow faster than exports.

Ans: (c)

Q. Disguised unemployment generally means (2013)

- (a) large number of people remain unemployed
- (b) alternative employment is not available
- (c) marginal productivity of labour is zero
- (d) productivity of workers is low

Ans: (c)

Mains

Q. Most of the unemployment in India is structural in nature. Examine the methodology adopted to compute unemployment in the country and suggest improvements. **(2023)**

Q. "Success of 'Make in India' program depends on the success of 'Skill India' programme and radical labour reforms." Discuss with logical arguments. **(2015)**

Q. "While we flaunt India's demographic dividend, we ignore the dropping rates of employability." What are we missing while doing so? Where will the jobs that India desperately needs come from? Explain. **(2014)**

Integrated Development of Wildlife Habitats

Source: [PIB](#)

Why in News?

Recently, the **Union Cabinet** approved the continuation of the [Centrally Sponsored Scheme of Integrated Development of Wildlife Habitats \(IDWH\)](#) for the [15th Finance Commission](#) cycle (2021-26).

What are the Key Facts About the IDWH?

- **About:** It aims to enhance the **protection and management** of wildlife habitats across India.
 - It encompasses various activities like **habitat restoration, community involvement** in conservation, and addressing **human-wildlife conflicts**.
- **Components of the Scheme:**
 - Support to [Protected Areas](#) (National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves).
 - Protection of wildlife **outside protected areas**.
 - Recovery programmes for saving [critically endangered species and habitats](#).
- **Subcomponents of IDWH:**
 - [Project Tiger](#): It was launched in India in **1973** with the primary objective to **protect and conserve** tiger populations in their natural habitats to prevent extinction.
 - [Project Elephant](#): It was launched in **1992** to address the decline in the elephant population due to **habitat loss and poaching**.
 - **Development of Wildlife Habitat**: It focuses on creating and enhancing habitats to

support wildlife conservation and biodiversity.

- [Project Dolphin](#) and [Project Lion](#) are under this subcomponent.

- **Conservation of Keystone Species:** The scheme focuses on [keystone species](#) such as **tigers, elephants, cheetahs, and lions**, which are indicators of ecosystem health.
 - It also supports lesser-known species identified under the [Species Recovery Programme](#) within the **Development of Wildlife Habitat component**.
 - **16 terrestrial and 6 aquatic species** have been identified for saving critically endangered species/ecosystems.

IUCN Status	Species
Critically Endangered	Great Indian Bustard, Hangul, Jerdon's Courser, Malabar Civet, Northern River Terrapin
Endangered	Asian Wild Buffalo, Brow-Antlered Deer (Sangai), Gangetic River Dolphin, Nilgiri Tahr, Arabian Sea Humpback Whale, Red Panda
Vulnerable	Asiatic Lion, Dugong, Indian Rhino or Great One-horned Rhinoceros, Nicobar Megapode, Snow Leopard, Swamp Deer, Clouded Leopard,
Near Threatened	Caracal (Globally: Least Concern)
Least Concern	Edible Nest Swiftlet

- **Beneficiary Areas:** The scheme is set to benefit **55 tiger reserves, 33 elephant reserves, and 718 protected areas** along with their zones of influence.
- **Technological Interventions:**
 - **M-STripES Application:** Project Tiger employs the [M-STripES \(Monitoring System for Tigers, Intensive Protection and Ecological Status\)](#) mobile application, that helps to capture data relating to tiger sightings, activities etc.
 - **Artificial Intelligence (AI):** The [All-India Tiger Estimation](#) process involves use of **AI for species-level identification**.
 - **Conservation Genetics Applications:** A Standard Operating Procedure (SOP) has been issued for the **translocation of tigers** based on their **genetic composition**.
 - Genetics is also applied to assess tiger populations in low-density areas and to analyse their **food ecology**.
- **Focus on Specific Animals:**
 - **Project Dolphin:** The Project Dolphin is proposed to be supported by **Remotely Operated Vehicles (ROVs)** and **passive acoustic monitoring devices** for the enumeration of dolphins as well as their habitat.
 - **Project Lion:** Project Lion will be reinforced by the vision in "[Lion@2047: A Vision for Amrut Kaal](#)," aiming to promote the long-term conservation of lions and their ecosystems.
 - **Project Cheetah:** The **Project Tiger component also supports** the ambitious Project Cheetah in India. The areas for introducing cheetahs will be expanded according to the [Cheetah Action Plan](#).
- **Livelihood Generation:** The continuation of the scheme is expected to generate **over 50 lakh man-days of employment** through direct engagement in conservation activities.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. Consider the following statements: (2018)

1. The definition of "Critical Wildlife Habitat" is incorporated in the Forest Rights Act, 2006.
2. For the first time in India, Baigas have been given Habitat Rights.
3. Union Ministry of Environment, Forest and Climate Change officially decides and declares Habitat Rights for Primitive and Vulnerable Tribal Groups in any part of India.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 3 only

(d) 1, 2 and 3

Ans: (a)

Landslide Induced Earthquake in Greenland

Source: TH

Why in News?

Recently, scientists detected unusual [seismic waves](#) around the world caused due to [landslides](#) in Greenland that lasted nine days.

- Unlike typical **earthquake signals (P and S waves)**, these waves exhibited a **single frequency**, suggesting a **non-seismic origin**.
- Seismologists initially labelled the phenomenon as a **“USO” (Unidentified Seismic Object)** due to its mysterious nature.

What are the Key Facts About this Landslide-Induced Earthquake?

- **Origin:** By analysing seismic data, satellite images, water level monitors, and simulations, scientists discovered that a **large landslide** in [Dickson Fjord, Greenland](#), triggered the event.
 - The collapse of **Hvide Stovhorn peak** led to a rock-ice avalanche, triggering a **submarine landslide**.
- **Seiche Effect in the Fjord:** In the **confined fjord**, waves **bounce** between its walls, creating a phenomenon known as a **“seiche.”**
 - This **back-and-forth sloshing** persisted for over nine days, with **waves oscillating** every 90 seconds.
- **Tsunami:** The earthquake gave rise to a **200-metre-high mega-tsunami** at an isolated place in the **Arctic Ocean region**. It didn't kill anyone but it damaged an unstaffed research facility on the **island of Ella**.
- **Global Reverberations:** The seiche waves sent seismic signals across the globe causing **Earth's surface to vibrate**.
 - This prolonged reverberation was detected on seismometers from the **Arctic to Antarctica**.
- **Link to Climate Change:** The landslide occurred because the glacier at the fjord's foot **melted and retreated** due to **global warming**, leaving the rocky slope unsupported and causing it to collapse.
 - It underscores the impact of **climate change in polar regions**, where warming accelerates ice melt, destabilising landscapes.

EARTHQUAKE



ABOUT

- Shaking of the earth; caused due to release of energy, generating **seismic waves in all directions**

EARTHQUAKE WAVES

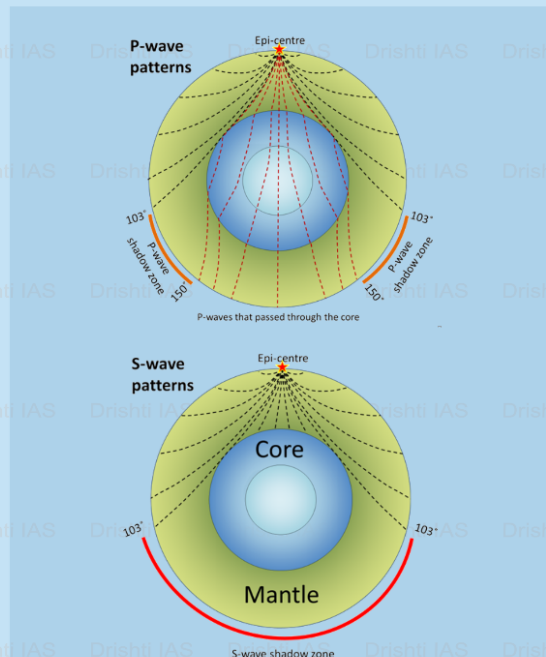
- Body Waves:** Move in all directions travelling through the body of the earth
 - P Waves:** Move faster, First to arrive at surface, Similar to sound waves, Travel through gaseous, liquid and solid materials
 - S Waves:** Arrive at surface with some time lag, Travel only through solid materials
- Surface Waves:** Last to report on seismographs, More destructive, Cause displacement of rocks
 - Love Waves:** Same motion as S-waves (horizontal) without vertical displacement, Sideways motion perpendicular to the direction of propagation, Faster than Rayleigh waves
 - Rayleigh Waves:** Cause the ground to shake in an elliptical pattern, Spread out the most of all seismic waves, Move vertically and horizontally in a vertical plane

HYPOCENTER

- Location where the earthquake starts (below earth's surface)

EPICENTER

- Location right above the Hypocenter (on the earth's surface)



CAUSES OF EARTHQUAKES

- Release of energy along a Fault/Fault Zones** (break in the crustal rocks)
- Movement of **tectonic plates (most common)**
- Volcanic eruption** (stress changes in rock-injection/withdrawal of magma)
- Human activities** (mining, explosion of chemical/nuclear devices etc.)

MEASURING EARTHQUAKE

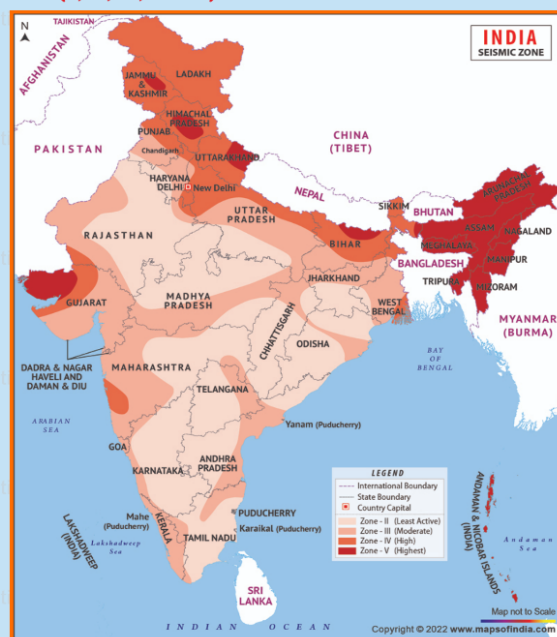
- Seismometers** - Measures seismic waves
- Richter Scale** - Measures magnitude (energy released; range: 0-10)
- Mercalli** - Measures intensity (visible damage; range: 1-12)

DISTRIBUTION

- Circum-Pacific Belt** - 81% of earthquakes
- Alpide Earthquake Belt** - 17% of the largest earthquakes
- Mid-Atlantic Ridge** - Mostly submerged underwater

EARTHQUAKE IN INDIA

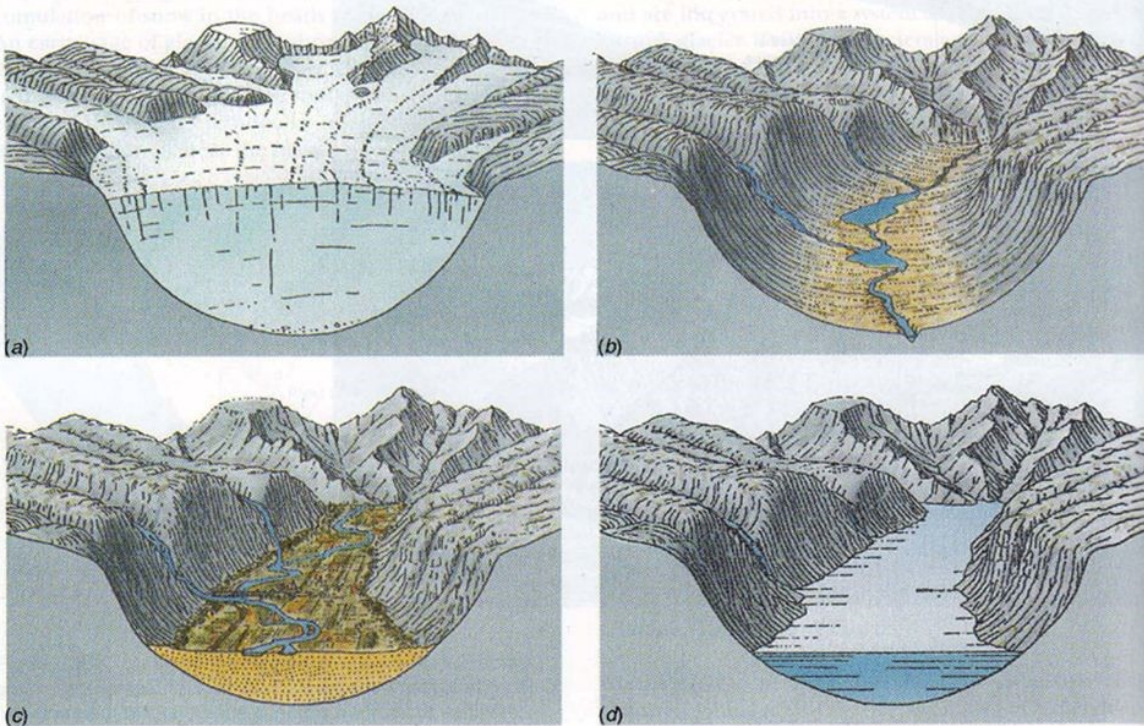
- India is **one of the highly earthquake affected countries** due to the presence of technically active mountains - the Himalayas.
- India has been divided into **4 seismic zones (II, III, IV, and V)**



What are Fjords?

- **About:** Fjords are **elongated, deep, narrow steep-sided inlets of the sea** that extend far inland and are formed due to the **inundation of a glaciated valley**.
 - Fjords are found in **mountainous areas** of both the **Northern and Southern Hemispheres**, particularly in the **higher latitudes** (up to about 80°).
- **Formation of Fjords:** Fjords were formed during the **last Ice Age** by glaciers. As glaciers moved slowly, they carved out **deep valleys**, leading to the creation of fjords.
 - Fjords are **deepest inland** because the **glacier's force was strongest** there during glaciation.

Glacial valley & Fjord formation



- **Geographic Distribution of Fjords:** Fjords are primarily found in **Norway, Chile, New Zealand, Canada, Greenland, and Alaska**.
- **Coral Reefs in Fjords:** Some fjords, particularly in **Norway**, host **deep cold-water coral reefs**, which support various marine species like **fish, plankton, and sea anemones**.
 - These cold-water reefs thrive in **complete darkness and under extreme pressure**, unlike their tropical counterparts.
- **Skerries (Rocky Islands):** Skerries are **small rocky islands** found around fjords, formed by glaciation. They are common along the **Scandinavian coastline**.
- **Fjords as Calm Harbours:** Despite the rocky islands or skerries that can make navigation difficult, fjords are generally **calm and protected**. This makes them **ideal harbours** for ships due to their tranquil waters.

Greenland

- **Largest Island:** Greenland is recognised as the **world's largest island** and functions as an **autonomous Denmark territory**.
 - Geographically, it is a part of the **North American continent**.
- **Climate:** Greenland experiences perpetual **daylight for two months** each year due to its high

latitude.

- **Strategic Importance:** The United States established a **radar base at Thule** at the start of the Cold War.



UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. With reference to the water on the planet Earth, consider the following statements: (2021)

1. The amount of water in the rivers and lakes is more than the amount of groundwater.
2. The amount of water in polar ice caps and glaciers is more than the amount of groundwater.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Ans: (b)

Q. Which of the following phenomena might have influenced the evolution of organisms? (2014)

1. Continental drift
2. Glacial cycles

Select the correct answer using the code given below:

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Ans: (c)

International Day for the Total Elimination of Nuclear Weapons

Source: UN

The [International Day for the Total Elimination of Nuclear Weapons](#) is celebrated on **September 26th every year** to raise awareness about the **threat of nuclear weapons and to promote their elimination**. It was declared by the [UN General Assembly \(UNGA\)](#) in 2013.

- The **first Special Session of the UNGA devoted to disarmament**, held in 1978, reaffirmed the preeminence of nuclear disarmament.
- The [Atomic Energy Commission \(1946\)](#) to propose measures for controlling nuclear energy and eliminating weapons of mass destruction.
- **Other Initiatives of UNGA:**
 - **Comprehensive disarmament in 1959**
 - **Special Session on Disarmament in 1978**
 - **Supported the [Treaty on the Prohibition of Nuclear Weapons \(TPNW\)](#)**
- **Efforts of India:**
 - India has advocated for **universal, non-discriminatory, and verifiable nuclear disarmament** within a time-bound framework, while supporting [non-proliferation and disarmament](#).
 - India is part of various groups to control the transfer of technology, materials, or components to entities that threaten international security and stability. Such as
 - [Wassenaar Arrangement](#)
 - [Australia Group \(AG\)](#)
 - [Missile Technology Control Regime \(MTCR\)](#)

Treaties Against Nuclear Weapons

Part - I

Nuclear Weapons

- The most dangerous weapons on earth; a **bomb or missile that uses nuclear energy to cause an explosion.**
- Nuclear weapons release energy either by **nuclear fission (atomic bombs) or nuclear fusion (hydrogen bombs).**
- Even a single weapon is potent of **destroying a whole city**, potentially **killing millions, jeopardising the natural environment** and lives of future generations.
- They were used for the **first and last time in WW-II** by the US in 1945 on **Hiroshima and Nagasaki.**

Treaty on the Non-Proliferation of Nuclear Weapons (NPT 1970)



- **Objective:**
 - Prevent the spread of nuclear weapons and its technology
 - Foster peaceful uses of nuclear energy
 - Further the goal of nuclear disarmament
- **Member States:**
 - 191 with **5 nuclear-weapon states (NWS)** (US, Russia, UK, France & China)
- **Nuclear-Weapon States:**
 - Those who **manufactured & exploded** a nuclear weapon or nuclear explosive device **before 1st January 1967**
- **Significance:**
 - **Only binding treaty** to the goal of disarmament by the NWS
- **India and NPT:**
 - India (along with Pakistan, Israel, North Korea, and South Sudan) is **not a member**
 - Opposes it as a **discriminative disarmament policy**
 - India's policy - **No First Use against NWS and no use against non-NWS**
- **NPT Review Conference:**
 - **Undertakes review** of the treaty's implementation **quinquennially**



Drishti IAS



Read More: [Securing India's Nuclear Future](#)

Food Import Rejection Alert (FIRA)

[Source: LM](#)

Recently, [Food Safety Standards Authority of India \(FSSAI\)](#) has developed an online portal **Food Import Rejection Alert (FIRA)** to notify the food import rejections at Indian borders to food safety authorities.

- **About FIRA:**
 - FIRA was **launched during** the second edition of the **Global Food Regulators Summit 2024** hosted by FSSAI in New Delhi.
 - **Global Food Regulators Summit 2024** aims to establish a global platform for food regulators to exchange insights on strengthening food safety systems and regulatory frameworks throughout the food value chain.
 - It has an **interactive online interface** designed for swift information dissemination, aimed at enhancing traceability and transparency.
- **FSSAI:**
 - It is an **autonomous statutory body** established under the **Food Safety and Standards Act, of 2006**.
 - It is responsible for **protecting and promoting public health** by regulating and supervising food safety and quality in India, operating under the **Ministry of Health & Family Welfare**.

Read More: [FSSAI to Streamline Food Safety Regulations](#)

CDSCO Flags 53 Drugs for Quality Issues

[Source: HT](#)

The [Central Drugs Standards Control Organisation \(CDSCO\)](#) flagged **53 drugs, including Paracetamol and Pan D**, as **'not of standard quality' (NSQ)**, raising significant **safety concerns** regarding their consumption.

- The CDSCO has issued two lists, one with **48 drugs that failed quality tests** and another with **5 drugs categorized as "Not of Standard Quality" (NSQ Alert)**, based on random monthly sampling by state drug officers.
- CDSCO under the Ministry of Health & Family Welfare, is the **Central Drug Authority** for discharging functions assigned to the Central Government of India under the [Drugs and Cosmetics Act, 1940](#).
 - Major functions of CDSCO include overseeing the regulatory control over drug imports, **approving new drugs and clinical trials**, and issuing certain licences as the Central License Approving Authority.

Read more: [India's Pharmaceutical Industry](#)

Food of the Future

[Source: LM](#)

Recently, the Indian government approved the [Biotechnology for Economy, Environment, and Employment \(BioE3\) Policy](#), prioritising the production of "smart proteins" as a key focus area.

▪ **About Smart Proteins:**

- Alternative or smart proteins refer to **proteins derived from unconventional sources** such as [algae, fungi, or insects](#), or **produced using advanced methods** like fermentation and lab-grown cells.
- The term also encompasses **plant-based proteins**, which have been available for decades, and are designed to replicate the taste and nutritional value of animal products without the need for breeding livestock.
- As per data, alternative protein production reduces environmental impact, using **72-99% less water, 47-99% less land, causing 51-91% less water pollution**, and emitting 30-90% fewer [greenhouse gases](#) compared to conventional meat production.

▪ **Safe and sustainable:**

- As incomes rise, people consume more protein, with **India's protein intake increasing from 9.7% of calories in 1991 to 11% in 2021**.
- Alternative proteins enhance food safety by mitigating the risk of [zoonotic diseases](#) and fostering ethical consumption but also align with Indian dietary habits

▪ **BioE3 Policy:**

- It is aimed at fostering high-performance [biomanufacturing](#), with broader **national goals such as achieving a 'Net Zero' carbon economy** and promoting sustainable growth through a [circular bioeconomy](#).

Read More: [BioE3 Policy and Biotechnology in India](#)

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