

**DAILY
CURRENT
AFFAIRS
ANALYSIS**



LAKSHYA ACADEMY®

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1 - Using SMILE to Build an Inclusive Society:

GS II

Government Policies and Interventions

- **A transgender person is who?**

- A person who is transgender is defined as one whose gender identity does not correspond with their biological gender, as per the Transgender Persons Act, 2019.
- Gender queer people, transgender people with intersex variations, and those with sociocultural identities like kinnar, hijra, aaravani, and jogta are all included.
- The 2011 Indian Census was the first in the nation's history to include the number of "trans" people living there. According to the report, 4.8 million Indians claimed to be transgender.

- **A SMILE Scheme: What Is It?**

- Following the amalgamation of previous schemes for transgender people and beggars, this new scheme was created.
- Comprehensive welfare and rehabilitation measures are offered to the transgender community and those who engage in the act of begging through the two sub-schemes of SMILE: "Central Sector Scheme for Comprehensive Rehabilitation for Welfare of Transgender Persons" and "Central Sector Scheme for Comprehensive Rehabilitation of engaged in the act of Begging."
- The programme allows transgender people to be rehabilitated by using the shelter homes that are now available through the State/UT Governments and Urban Local Bodies.
- The implementing authorities are required to establish new, dedicated shelter homes in the event that the current shelters are unavailable.
- The programme places a lot of emphasis on things like counselling, basic paperwork, education, skill development, and economic relations in addition to rehabilitation and medical facilities.
- An estimated 60,000 of the world's poorest people would benefit from this programme in order to live dignified lives.
- For transgender students enrolled in classes 9 and up till graduation, it offers scholarships to help them finish their education.
- Under the PM-DAKSH system, it includes provisions for livelihood and skill development.
- In conjunction with the Pradhan Mantri Jan Aarogya Yojana (PM-JAY), Composite Medical Health offers a comprehensive package that supports gender-affirming procedures at a number of participating facilities.
- Food, clothing, recreational possibilities, skill development, recreational activities, medical care, etc. are provided to the transgender community and those who beg at the Garima Greh housing complex.

- **Execution:**

- Community Based Organisations (CBOs), institutions, voluntary organisations, state and local governments, and others will support its implementation.
- Every state will have a transgender protection cell to keep an eye on criminal situations and to guarantee prompt registration, investigation, and punishment of offenders.
- When assistance is needed, the National Portal & Helpline will give the transgender community and those who beg for food the information and resources they need.

- **Plan for Thorough Rehabilitating of Offenders:**

- The programme has been piloted in the chosen cities, where there are significant populations of transgender and beggars.
- In 2019–20, this Ministry gave the National Institute of Social Defence (NISD) Rs. 1 crore and the National Backward Classes Finance & Development Corporation (NBCFDC) Rs. 70 lakh for beggars' skill development projects.

- **What Issues Do Transgender Persons Face?**

- **Social Exclusion:** Transgender people frequently experience social exclusion and marginalisation, which can result in mental health problems, drug misuse, and a lower standard of living.
- **Stereotyping and Misrepresentation:** Transgender individuals face barriers to work, education, and healthcare due to societal stereotypes.
- **Family Rejection:** A large number of transgender people experience family disavowal, which leaves them without assistance from their relatives and unstable financial situations.
- **Violence and Hate Crimes:** Sexual assault, verbal and physical abuse, and hate crimes pose serious risks to the safety and wellbeing of transgender people.
- **Educational Barriers:** Access to high-quality education and future professional opportunities are hampered by discrimination in educational institutions.
- **Employment prejudice:** Transgender people often face prejudice in the workplace, which increases their vulnerability to poverty by causing underemployment or unemployment.
- **Healthcare Disparities:** Transgender people are frequently discouraged from seeking critical medical care, including gender-affirming operations, by discrimination on the part of healthcare practitioners.
- **Legal Ambiguity:** The Transgender Persons (Protection of Rights) Act, 2019 has brought about progress in India, but there are still holes and ambiguities in the law that need to be filled.
- Transgender individuals are not adequately defined, and the Act makes no allowances for gender self-determination.

- **Absence of Comprehensive Policies:** It is still difficult to establish comprehensive laws pertaining to transgender rights, gender identity, and non-binary genders.
- **Implementation Gaps:** Because of ignorance, bias, and reluctance on the part of authorities, the application of current laws is frequently inefficient.

- **Which Initiatives Are Available for Transgender People?**

- A Memorandum of Understanding (MoU) has been inked with the National Health Authority regarding the provision of a specialised Ayushman Bharat TG Plus card, which entitles transgender individuals to over 50 health benefit services. Additionally, the Ayushman Bharat scheme covers cosmetic treatments and first-time gender reassignment.
- According to its policy requirements, Swachh Bharat Mission (Urban) has designated restrooms for transgender individuals.
- The National Transgender Personality Portal
- Rules for the Protection of Rights for Transgender Persons, 2020
- The National Organisation for Transgender People
- Identity Certificate
- Policy of Equal Opportunity

- **What More Can Be Done to Encourage Transgender People?**

- **Transgender-Inclusive Policies:** The legal and law enforcement sectors must be strengthened and made more aware of the concerns facing the transgender population.
- Plans for and adoption of an inclusive transgender strategy are required from the government and society.
- Their complaints about not being involved in the creation of policies or decision-making processes must be addressed, and opportunities for their public engagement should rise.
- **Taking Care of Social Concerns:** As recommended by the NALSA Judgement, the transgender community needs to have access to social entitlements, supportive education, and free legal assistance on a grassroots level.
- All hospitals and clinics, whether private or public, need to have distinct health care policies that are clearly defined and disseminated.
- Raising awareness and fostering a culture of respect and acceptance for the transgender population are imperative.
- **Financial Security:** To launch a career as an entrepreneur or businessman, generous credit facilities and financial support must be guaranteed, akin to SHG-Bank Linkage Programmes.
- **Transgender in Prisons:** Two crucial instruments for addressing the issues pertaining to sexual minorities, particularly trans prisoners, are awareness and documentation.
- The treatment of transgender inmates requires a gender-fluid approach, as the Commonwealth Human Rights Initiative (CHRI) promotes.

- In order to uphold the mandate of the NALSA ruling, the Union government should take the CHRI's suggestions into consideration and develop a "model policy" on the unique requirements of transgender prisoners through a process of consultation with the trans community.

Source → The Hindu

2 - FIDF and the Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana:

GS II

Government Policies and Interventions

- **The Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana: What is it?**
- The Pradhan Mantri Matsya Sampada (PMMSY) includes the PM-MKSSY Central Sector Sub-scheme, which aims to formalise the fisheries sector and support fisheries micro and small enterprises by investing over Rs. 6,000 crores over the course of the next four years, from FY 2023–24 to FY 2026–27 in all States and Union Territories.
- **Goals:**
 - Fishers, fish growers, and support staff will gradually formalise the unorganised fisheries sector by self-registering on the National Fisheries Sector Digital Platform (NFDP).
 - facilitating small and micro businesses in the fishing sector's access to institutional funding.
 - offering beneficiaries a one-time incentive to get aquaculture insurance.
 - encouraging the implementation and growth of fisheries safety and quality assurance systems, as well as the preservation of jobs related to fisheries.
- **The intended recipients are:**
 - Vendors, fish workers, fishermen, fish farmers, and other players in the fisheries value chain.
 - Micro and small businesses involved in fisheries and aquaculture, including proprietary companies, partnership firms, cooperatives, federations, startups, Fish FPOs (FFPOs), and more.
 - Farmers Producer Organisations (FPOs) are another type of FFPO.
 - any more recipients who might be designated as targeted recipients by the Department of Fisheries.

- **Strategy of Implementation:**

- Component 1-A: Fisheries Sector Formalisation
- The establishment of the NFDP will formalise the unorganised fishing industry by compiling a national registry of participants.
- The NFDP helps with project preparation, training, enhancing financial literacy, and bolstering cooperative societies for fisheries.
- Component 1-B: Encouraging the Adoption of Insurance for Aquaculture:
- Aquaculture insurance products covering at least 1 lakh hectares should be established, with a maximum incentive of Rs. 1,00,000 per farmer (for farms up to 4 hectares in size) and a 40% incentive for intensive aquaculture techniques.
- Beneficiaries who are women, members of Scheduled Tribes (STs), and members of Scheduled Castes (SCs) earn an extra 10% incentive.
- Component 2: Encouraging Microenterprises to Boost Value Chain Efficiencies in the Fisheries Sector:
- Increasing the efficiency of the value chain by offering performance incentives. Performance Grant Scale and Criteria:

- **Small businesses:**

- General Category: Maximum grant of Rs. 35 lakhs, or 25% of total investment, applies.
- Women-owned, SC, ST, and capped at Rs. 45 lakhs, or 35 percent of total investment, as a grant.
- Organisations and Federations at the village level: up to Rs. 200 lakhs (or 35 percent of the total investment), whichever is less.
- Component 3: Quality Assurance and Safety Systems for Fish and Fishery Products:
- Encourage the development of safe and high-quality fishing businesses to expand the market and create jobs, especially for women.

- The microenterprise in Value Chain Efficiencies is the same as this one.
- Small businesses: 35% of total investment, or Rs. 100 lakhs, for (SC/ST/women-owned); 25% of total investment, or Rs. 75 lakhs, for (General Category).
- Village Organisations and Federations: Identical to the one found in Value Chain Efficiencies.
- Project management, oversight, and reporting comprise Component 4:
- creation of Project Management Units (PMUs) to oversee, carry out, keep an eye on, and assess project-related activities.

- **India's Fisheries Sector:**

- India is the third largest fish producer in the world, accounting for 8% of global fish production, with a total fish output of 174 lakh tonnes in 2022–2023.
- During the course of ten years (2013–2023–24):

- There was a 79.66 lakh tonnes rise in fish production.
- Coastal aquaculture expanded rapidly during that time.
- Production of prawns increased by 270%.
- Exports of prawns more than doubled, showing a 123% increase.
- Approximately 63 lakh fishers and fish farmers now have work and means of subsistence.
- Under the Group Accident Insurance Scheme (GAIS), coverage for each fisherman increased from Rs. 1.00 lakh to Rs. 5.00 lakh, benefiting a total of 267.76 lakh fishermen.
- A total of 1.8 lakh cards were issued as a result of the Kisan Credit Card (KCC) being extended to the fishing industry in 2019.
- Notwithstanding notable advancements, the industry still faces a number of difficulties, such as its unregulated character, the absence of work-based identities, crop risk mitigation, institutional financing availability, and the inadequate safety and quality standards of fish sold by micro and small businesses.

- **What is the Fund for the Development of Fisheries Infrastructure (FIDF)?**

- The Department of Fisheries (Ministry of Fisheries, Animal Husbandry & Dairying) established the FIDF to supplement programmes like PMMSY and KCC.
- The establishment of fisheries infrastructure facilities in the inland and marine fishing sectors is anticipated by FIDF.

- **Mechanism of Implementation:**

- Concessional Financing: Through Nodal Lending Entities (NLEs), such as the National Cooperatives Development Corporation (NCDC), the Federal Insurance Discretion Fund (FIDF), and all scheduled banks, Eligible Entities (EEs) can obtain concessional funding.
- Under the FIDF, EEs might be state governments, private corporations, NGOs, cooperatives, cooperative federations for fisheries, women entrepreneurs, and more.

- **Interest-Based Subvention:**

- The Indian government provides an interest subsidy of up to 3% annually.
- The 12-year repayment period includes a two-year grace period during which the NLEs will provide concessional financing at a minimum annual interest rate of 5%.

Source → The Hindu

3 - Atmospheric river:

GS I

Geography related issues

- **An atmospheric river: what is it?**

- Significant volumes of water vapour are transported from the tropics to higher latitudes by the atmospheric river, a long, narrow stretch of wet air.
- The Atmospheric River and the mT (Maritime Tropical) air mass are frequently linked.
- Upon reaching land, these rivers discharge their fluid as heavy precipitation, which, depending on temperature and height, may appear as snow or rain.
- The water vapour they carry is about equal to the typical water flow at the mouth of the Mississippi River, according to the National Oceanic and Atmospheric Administration (NOAA).
- They could therefore result in severe floods when they land and unleash all that water.

- **Pineapple Express:**

- One well-known example of an atmospheric river storm that dumps a lot of rain on the US West Coast, especially in California, is the "Pineapple Express".
- The term comes from the fact that these storms take moisture from the tropical waters close to the Hawaiian Islands; they resemble a moisture "express" train that starts from the area around Hawaii, a place that is frequently connected to pineapples.
- This atmospheric river carries warm, humid mid-latitude air from as far away as the Hawaiian Islands, propelled by a powerful southern branch of the polar jet stream.
- An image captured by a satellite of clouds over the Pacific Ocean depicts the "Pineapple Express," a phenomena when a powerful jet stream transports mid-trope air from Hawaii all the way to the West Coast.

- **Categories:**

- Category 1 (Weak): A milder, shorter-lived weather event with mostly positive impacts, such as a day of moderate rainfall, would be considered a Category 1 atmospheric river.
- Category 2 (Moderate): A Category 2 atmospheric river is a storm that is primarily helpful but can potentially be dangerous.
- Category 3 (Strong): A storm in this category may bring 5–10 inches of rain over 36 hours, which would help replenish reservoirs but also push some rivers near flood stage. A Category 3

atmospheric river is more potent and longer lasting, with a balance of beneficial and hazardous impacts.

- Category 4 (Extreme): A storm of this grade might dump enough heavy rain over several days to put several rivers to flood stage. A Category 4 atmospheric river is mostly dangerous, but it can also have some positive elements.
- Category 5 (Exceptional): The main danger associated with an atmospheric river is danger.
- Over the course of the 1996–1997 New Year's holiday, an atmospheric river lasted over 100 hours over the coast of Central California, causing about USD 100 billion in damage from torrential rain and runoff.

- **Importance:**

- They are essential for replenishing water supplies, especially in areas such as the western United States, where their heavy precipitation can raise reservoir levels to an extent that helps mitigate drought conditions and ensures water availability for home, industrial, and agricultural use.
- Understanding atmospheric rivers is crucial for efficient planning and management of water resources, including flood control, water storage, and resource allocation to meet demand. This is because atmospheric rivers are crucial for the supply of water.
- By moving vast volumes of water vapour from the tropics to higher latitudes, atmospheric rivers aid in the maintenance of the hydrological cycle's equilibrium by redistributing moisture throughout various regions, hence promoting agricultural productivity and ecosystems.
- Distinguishing an atmospheric river from a conventional river on Earth's surface is crucial. An atmospheric river is an extended, transparent passageway in the sky that transports substantial volumes of water vapour, impacting precipitation and weather patterns.

- **Where do Atmospheric Rivers Occur and How Common are They?**

- These rivers of moisture can occur anywhere in the world, not only the US West Coast; they can reach thousands of kilometres and impact places like the UK, Ireland, Norway, and China.
- China's Mei-Yu season, or rainy season, is frequently made worse by atmospheric rivers.
- As atmospheric rivers are predictable and may be forecast up to a week in advance, they contribute significantly to California's precipitation, snowpack, and catastrophic floods, even though they only make up 17% of storms on the US West Coast.

Source → The Hindu

4 - CAR-T Cell Treatment:

GS III

Science and Technology

- **CAR-T Cell Therapy: What Is It?**

- About: Chimeric antigen receptor T-cell therapy, or CAR-T cell therapy, is a kind of immunotherapy that fights cancer by utilising the patient's own immune system.
- Leukaemias (cancers originating from white blood cells) and lymphomas (arising from the lymphatic system) are now recognised indications for CAR T-cell treatment.
- CAR-T cell treatments are sometimes called "living drugs."
- **Procedure: The course of treatment is intricate and individualised, encompassing:**
 - Gathering T cells: The patient's blood is used to extract T cells, a type of white blood cell that aids in the fight against infection, using a procedure called apheresis.
 - Genetic Engineering: T cells are genetically engineered in a lab to express a unique protein on their surface known as a chimeric antigen receptor (CAR).
 - The purpose of this CAR is to identify and attach to a particular antigen, or marker, present on cancer cells.
 - Expansion: In the laboratory, a significant number of the modified T cells are produced.
 - Infusion: The patient's circulation is subsequently replenished with the enlarged CAR-T cells, enabling them to recognise and eliminate cancer cells that express the specific antigen.
 - Development in India: ImmunoACT, the Indian Institute of Technology Bombay (IIT-B), and Tata Memorial Hospital have worked together to create NexCAR19, an indigenous treatment for B-cell malignancies.
 - The Central Drugs Standard Control Organisation (CDSCO) authorised the commercial use of this medicine in October 2023 to treat certain blood malignancies.
 - The first CAR-T cell treatment approved by CDSCO is called NexCAR19.

- **Possible Advantages of CAR-T Infusion:**

- High Remission Rates: CAR-T therapy has the potential to produce a high rate of full remission in certain patients with advanced malignancies who have not responded to previous treatments.
- Personalised Approach: This highly targeted treatment is adapted to the specific malignancy of each patient.

- **Possible issues:**

- **Serious Side Effects:** CAR-T therapy may result in severe side effects, such as neurological symptoms (severe disorientation, convulsions, and speech impairment) and cytokine release syndrome (widespread immune system activation and collateral damage to the body's normal cells).
- **Expensive:** CAR-T therapy is an extremely costly medical procedure.

Source → The Hindu



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