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Population Explosion and Fertility Rates

The Prime Minister highlighted “**population explosion**” and underscored the need for “social awareness” to deal with this concern while addressing the nation on 73rd Independence Day.

However, trends indicate that the country has **consistently made gradual improvements** in curbing its fertility rates.

Total Fertility Rate

- The national Total Fertility Rate (TFR) is estimated to be still marginally higher than the replacement rate.
- The latest estimates (for 2017) by the **Sample Registration System (SRS)** under the Registrar General of India (RGI) has pegged the **country's TFR at 2.2**, marginally more than the **replacement rate which stands at 2.1**.
 - **TFR** measures the number of children born to a woman at the end of childbearing age.
 - **Replacement Rate** is the average number of children a woman needs to have to keep the population at a constant size.

Sample Registration System

- The **Sample Registration System (SRS)** is a large-scale demographic survey for providing reliable annual estimates of Infant mortality rate, birth rate, death rate and other fertility & mortality indicators at the national and subnational levels.
- The field investigation consists of **continuous enumeration of births and deaths in selected sample units** by resident part time enumerators, generally anganwadi workers & teachers, and an independent survey every six months by SRS supervisors. The data obtained by these two independent functionaries are matched. The unmatched and partially matched events are re-verified in the field. The SRS sample is

replaced every ten years based on the latest census frame.

States with higher TFR

- Seven states have recorded a higher TFR than the national average of 2.2 — Uttar Pradesh (3.0), Bihar (3.2), Madhya Pradesh (2.7), Rajasthan (2.6), Assam (2.3), Chhattisgarh (2.4) and Jharkhand (2.5) — that account for about 45% of the total population in the 2011 Census.
- Gujarat and Haryana, too, recorded a TFR of 2.2, which is above the replacement rate but is equal to the national average.

States with lower TFR

- Relatively well off states in the south — Kerala (1.7), Tamil Nadu (1.6), Karnataka (1.7), Maharashtra (1.7), Andhra Pradesh (1.6) and Telangana (1.7) — demonstrate fertility rates and TFR below the rate required for population replacement,
- West Bengal (1.6), Jammu and Kashmir (1.6) and Odisha (1.9), too, were estimated to have lower TFRs in 2017.

Reasons for trends in TFR

- The latest report of 2017 underlined that the TFR has declined from 5.2 to 4.5 between 1971 and 1981 and from 3.6 to 2.2 between 1991 and 2017.
- Trends vary along the **rural-urban divide as well as the literacy levels** of women.
 - The SRS reveals that while an **“illiterate” woman** is likely to give birth to 2.9 children on average, a **“literate” woman** will produce fewer (2.1) children. The TFR for a woman with education levels of a **graduate or above** is 1.4 children.
 - Likewise, urban areas have been usually found to have a lower TFR than rural areas.
- This decline in fertility rates is also reflected in the total population growth recorded in the Census. The decadal population growth in the intervening period between the 2001 Census and the 2011 Census has seen a decline after the 1971 Census.

Source: Indian Express

Chief of Defence Staff

The Prime Minister has announced the establishment of the post of Chief of Defence Staff (CDS) for the three services – the Indian Army, the Indian Navy and the Indian Air Force.

- The Chief of Defence Staff (CDS) is a post that will act as the **single-point advisor** to the Government of India.

- It will **synergise long term planning, procurement, training and logistics** of the three Services, and ensure better **coordination** between them.
- The creation of a CDS to act as a single point military adviser to the Prime Minister on strategic issues was one of the key recommendations of the **Kargil review committee** on higher military reforms after the 1999 conflict.

Need for Chief of Defence Staff

- **Incoherency:** In general, the policy formulation is done by Defense Secretary, who is a bureaucrat, while its execution rests with Chiefs of armed forces. **This makes defence policy incoherent.**
- **Modern Warfare:** The emergence of **modern warfare domains** like Space, Cyber etc, requires a more **integrated approach** to defense strategy.
- A **group of ministers that was formed in 2001** to explore necessary reforms required to improve India's national security had also favoured creating the post of Chief of Defence Staff.
- In **2012 Naresh Chandra task force** recommended the appointment of a permanent chairman of chiefs of staff committee.
 - The permanent chairman of chiefs of staff committee is the senior most of the three Chiefs.
- The CDS is also one of the 99 recommendations made by the **Lt. General D.B. Shekatkar (retd.) committee (2016).**

Significance

- The creation of the CDS will eventually lead to the **formation of tri-service theatre commands** intended to create vertical integration of the three forces.
- This is expected to **save money** by avoiding duplication between the Services, at a time of shrinking capital expenditure within the defence budget.
- It will help India in **Defense diplomacy.**

Source: TH

Kisan Credit Card (KCC) Saturation Campaign

Recently, banks have kickstarted a **Kisan Credit Card (KCC) saturation campaign**, for giving Kisan Credit Card (KCC) **loans to farmers who have not been given such loans.**

- According to the Ministry of Agriculture and Farmers' Welfare, **currently there are 6.92 crore live KCCs, against 14.5 crore operational landholdings.**
- The scheme comes with an **ATM-enabled RuPay debit card** with facilities for one-time documentation, built-in cost escalation in the limit, and any number of drawals

within the limit.

- Besides ensuring saturation, banks will also be taking steps to **link Aadhaar** immediately as **no interest subvention** will be given if the Aadhaar numbers are not seeded to KCC accounts.
- Also, the government has taken several initiatives for KCC saturation which include adding farmers engaged in **animal husbandry and fisheries, no processing fee of loan under KCC and raising limit of collateral free agriculture loan from ₹ 1 lakh to ₹1.6 lakh.**

Kisan Credit Card

- The Kisan Credit Card (KCC) scheme was **introduced in 1998** for providing adequate and timely credit support from the banking system under a single window with flexible and simplified procedure to the farmers for their cultivation and other needs like purchase of agriculture inputs such as seeds, fertilizers, pesticides etc. and draw cash for their production needs.
- The scheme was further extended for the investment credit requirement of farmers viz. allied and non-farm activities in the year 2004.
- **KCC covers post-harvest expenses, produce marketing loan, consumption requirements of farmer household, working capital for maintenance of farm assets and activities allied to agriculture, investment credit requirement for agriculture and allied activities.**
- The Kisan Credit Card Scheme is implemented by Commercial Banks, RRBs, Small Finance Banks and Cooperatives.

Interest Subvention Scheme

- It aims to provide short-term crop loans up to ₹3 lakh to farmers at an interest rate of **7 per cent per annum.**
- Lending institutions – PSBs and private sector commercial banks **offer interest subvention of 2 per cent by the government.**
- The policy came into force with effect from 2006-07
- The Interest Subvention Scheme is being implemented by **NABARD** and **RBI.**

Source: THBL

Microplastics in Snow

The study conducted by scientists at Germany's Alfred Wegener Institute and Switzerland's Institute for Snow and Avalanche Research has found that **microplastic particles can be transported tremendous distances through the atmosphere.**

Course of microplastics

- Every year, several million tonnes of plastic litter course through rivers and out to the oceans, where they are gradually **broken down into smaller fragments through the motion of waves and ultraviolet light of the sun.**

The smaller fragments less than five millimeters long are termed as microplastics.

- **Winds and thermal currents carry microplastics into the atmosphere** from the sea and land.
- Microplastics in the atmosphere are trapped by the clouds and the **falling snow.**
- Minute microplastic particles have been detected in the Arctic and the Alps. Samples from ice floes (sheet of floating ice) on the ocean between Greenland and Svalbard contained an average of 1,760 microplastic particles per litre.
- The team's hypothesis for airborne transportation builds on past research conducted on pollen, where experts confirmed that pollen from near the equator ends up in the Arctic.

Source: TH

Plastic Industry

Plastic manufacturers, in a recent meeting with government, have called for **export promotion schemes** for Micro, Small, Medium Enterprises (**MSMEs**) in the **plastic industry.**

- The manufacturers have sought allocation of **25% of the land available at all industrial corridors** for MSMEs at discounted rates.
- The industry also sought **world-class infrastructure for MSMEs** under the Public Private Partnership model comprising physical infrastructure, knowledge infrastructure, incubation centres, e-platforms, B2B access and technology and innovation support for MSME.
- The industry appealed to the government to make **lending to MSMEs more convenient.**
- It also demanded **direct tax exemption on export income** and income generated directly or indirectly from indigenisation as well as import substitution exemption for a period of five years.
- It also asked for the **removal of anti-dumping duty on plastic processing machines** not made in India.

Challenges to the Plastic Industry

- Plastics have taken up a sizeable chunk of the **municipal solid waste streams** and

hence are posing an environmental issue.

- Plastics, being a polymer derived from crude, are made up of long chains of carbon. It takes years for them to decompose completely.
- Improper disposal of plastics leads to groundwater pollution, disturbance in soil microbial activity along with releasing of carcinogenic chemicals in the atmosphere leading to health issues among people.
- **Availability of raw materials** such as Poly Vinyl Chloride (PVC), **Polypropylene** (PP), **Polyethylene** (PE), being linked to crude prices.
- **Anti Dumping Duty on machineries** imported by the plastic processors.

Suggestions

- Producing **Bio-plastics** which are made from renewable materials such as biomass.
- Promoting **plastic waste management infrastructure** in the country.

Source: TH

Agritech Startups

According to a recent NASSCOM report, yearly growth of agritech startups in India has been at a rate of 25%.

- India is home to more than 450 startups in the agriculture technology sector, of the global total of about 3,100.
- With Indian farmers facing post harvest losses amounting to Rs 93,000 crore, these agritech startups can address this issue with demand driven cold chains, warehouse monitoring solutions and market linkages that can significantly boost farmer income.
Agritech startups such as Ninjacart and Crofarm are creating direct market linkages through digital platforms

Applications of Agritech Startups

- These could support evolving business areas such as **farm to fork** (Direct delivery of produce from farmers to markets).
- Innovations like **image sensing for quality grading**.
- **Storage monitoring based on the Internet of Things**.
- **Digitisation of mandis**, as well as farmer producer organisations.
- **Solving farmers' credit issues** (providing low cost digital loans using virtual credit cards to farmers).
- Increase crop productivity by using **big data analytics**.
- **Artificial Intelligence** and remote sensing to improve land management, crop cycle monitoring and harvest traceability.

Source: TH

Maharshi Badrayan Vyas Samman

The President of India has awarded the selected scholars with the MaharshiBadrayanVyas Samman for the year 2019.

The Maharshi Badrayan Vyas Samman was instituted by the Government of India to honour young scholars, aged 30-45 years, in recognition of their significant contribution in the field of Persian, Arabic, Pali, Prakrit and Classical Indian languages.

- As of now, six languages i.e. Tamil, Sanskrit, Telugu, Kannada, Malayalam and Odia have been given the status of classical languages.
- The criteria evolved by the Government to determine declaration of a language as a Classical language is as under:
 - High antiquity of its early texts/recorded history over a period of 1500-2000 years.
 - A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers.
 - The literary tradition be original and not borrowed from another speech community.
 - The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.

Source: PIB

Kondapalli Toys

Kondapalli toys, **cultural icons of Andhra Pradesh**, are one of the most sold handicrafts in India and abroad, across online, wholesale, and retail platforms.

- The '**Tella Poniki**' **wood** gives the toys a unique character. No other wood can be a replacement to make these toys as Tella Poniki is malleable and can be easily chiseled into the desired shape.
- Kondapalli Toys have been granted the **Geographical Indications (GI) tag**.

Source: TH

SUPRA Scheme

The Science and Engineering Research Board (SERB) has proposed a new scheme, **Scientific and Useful Profound Research Advancement (SUPRA)** with the objective of funding exploration of new scientific and engineering breakthroughs with global impact.

- The scheme **will fund disruptive ideas** that can lead to new areas of study, new scientific concepts, new products and technologies.
- The focus is not on incremental or short-term advances in understanding, but new science or truly disruptive technologies.
- The scheme is **designed to attract high quality research proposals** consisting of new hypotheses or challenge existing ones and provide 'out-of-box' solutions.

Science and Engineering Research Board

It was set up as a statutory body in 2009 under the Department of Science and Technology to promote and fund research in different scientific disciplines.

Source: Hindu Business Line
