

## Prelim Bits 29-12-2021 | UPSC Daily Current Affairs

### Extreme Cold Weather Clothing System

*Defence Research and Development Organisation (DRDO) has handed over technology for indigenous Extreme Cold Weather Clothing System (ECWCS) to some Indian companies.*

- The Extreme Cold Weather Clothing System is ergonomically-designed modular, three-layered **technical clothing** system that can be used at various climatic conditions in extreme altitude combat operations.
- It is designed to provide **thermal insulation** over a temperature range of +15 to -50° Celsius with different combinations of the layers and intensity of physical work.
- It embodies **physiological concepts** related to reduction in respiratory heat and water loss, unhindered range of motions and rapid absorption of sweat.
- It provides **water proof, wind proof** features with adequate breathability.
- The outer layer of the clothing is reversible for camouflage purposes in both snow bound terrain as well as areas without snow cover.
- ECWCS meets the insulation requirements (IREQ) for the widely fluctuating weather conditions in the Himalayan peaks.
- **Significance** - The Indian Army, till recently has been importing ECWCS and several Special Clothing and Mountaineering Equipment (SCME) items for the troops deployed in high altitude regions.
- ECWCS is a viable import alternative for the Indian Army for its sustained operations in glacier and Himalayan peaks.
- **Related Links** - [Technical Textiles](#)

#### Reference

1. <https://pib.gov.in/PressReleasePage.aspx?PRID=1785810>
2. <https://www.drdo.gov.in/sites/default/files/inline-files/ecwcs.pdf>
3. <https://frontline.thehindu.com/dispatches/drdo-hands-over-technology-to-manufacture-extreme-cold-weather-clothing-system-to-five-industry-partners/article38060394.ece>

### Gram Ujala Programme

*The Government has achieved a remarkable milestone of distributing 50 lakhs LED bulbs under Project Crore of their Gram Ujala programme.*

- Under the Gram Ujala scheme, high quality 7-Watt and 12-Watt LED bulbs with 3 years guarantee is provided at Rs. 10 per bulb in exchange of working 60-Watt and 100-Watt incandescent bulbs.
- [LED is a highly energy efficient lighting technology. Residential LED bulbs use at least 75% less energy than the conventional ones and last 25 times longer.]
- Every household can exchange a maximum of 5 bulbs. The government will also install meters at these houses.
- Gram Ujala scheme is being implemented in rural households in Bihar, Uttar Pradesh, Andhra

Pradesh, Karnataka, and Telangana.

- It is implemented by the Convergence Energy Services Limited (CESL).
- The programme is active till March 31, 2022.

Gram Ujala Programme is based upon the Clean Development Mechanism (CDM) protocols of the United Nations.

## Convergence Energy Services Limited

- Convergence Energy Services Limited (CESL) is a wholly-owned subsidiary of Energy Efficiency Services Limited (EESL).
- [EESL is a joint venture of public sector companies under the Ministry of Power.]
- CESL is focused on delivering clean, affordable, and reliable energy.
- CESL focuses on energy solutions that lie at the confluence of renewable energy, electric mobility, and climate change.
- CESL is also working towards enabling battery-powered electric mobility and its infrastructure and design business models to increase the uptake of electric vehicles in India.
- By employing unique business models, Convergence is utilizing a blend of concessional and commercial capital, carbon finance and grants as appropriate to enable commercialization of these solutions at scale.

## Reference

1. <https://pib.gov.in/PressReleasePage.aspx?PRID=1785737>
2. <https://www.hindustantimes.com/india-news/what-is-gram-ujala-scheme-all-you-need-to-know-101639445684397.html>
3. <https://www.thehindu.com/news/national/andhra-pradesh/gram-ujala-to-light-up-rural-households-in-state/article3545574e>

## Evolution of Pregnancy

*A recent study on the Eurasian common lizard (Zootoca vivipara) that exhibits the rare incidence of both oviparity and viviparity helps in understanding the genetic basis of the evolution of pregnancy.*

Viviparity is the live-bearing behaviour to beget young ones.

Oviparity is the egg-laying behaviour to beget young ones.

- Through the Convergent evolution, viviparity (as opposed to oviparity) has evolved independently in vertebrates at least 150 times.
- [Convergent evolution is a phenomenon where different species evolve similar characteristics though they come from very different lineages.]
- In squamates alone, viviparity has evolved independently 115 times.
- [Squamates are a group including lizards, snakes and worm lizards or amphisbaenians.]
- Different **geographically separated** populations of the same species Eurasian common lizard show both Viviparity and Oviparity.
- Two populations have diverged as recently as nearly 4 million years ago.
- So, this may be seen as a transition stage in moving from one parity to another parity.
- By studying the genomic comparison between these two populations, the researchers have

also seen **hybrid members**, in areas where the two populations overlap.

- The development of viviparity is accompanied by changes in the mother and the development of the embryo.
- For instance, active physiological exchange of water, gas and calcium from mother to embryo and an adjusted immune response for maternal-foetal communication.
- In advanced stages of viviparity, more complex placentation is seen with enhanced nutrition transfer from mother to baby.
- In the Eurasian common lizard, viviparity is at a relatively early stage.
- **Significance** - The study helps in understanding the genetic basis of the evolution of pregnancy, and the fact of seeing both parities in the same species makes this study unique and insightful.

## Reference

<https://www.thehindu.com/sci-tech/science/the-progress-of-evolution/article38053451.ece>

## RBI's Retail Direct Scheme

- RBI's Retail Direct platform allows individuals to open and maintain a no-charge Retail Direct Gilt (RDG) account directly with the RBI.
- NRIs eligible to invest in g-secs under FEMA can open this account too.
- This platform helps in buying government debt securities (G-Secs), either during their initial issue or after they begin to trade in the secondary market.
- RBI's Retail Direct platform gives you access to primary auctions first.
- To get access to secondary market trades which happen on the Negotiated Dealing System - Order Matching (NDS-OM), you need to apply separately on Retail Direct to get a user login and password.
- RBI conducts periodic auctions of g-secs according to a schedule called the borrowing calendar that it puts out every half year for g-secs and quarter for treasury bills.
- Through this new platform, retail investors can invest a minimum of ₹10,000 going up to ₹2 crore in these auctions.
- **Auctions** - In the Retail Direct Scheme, the four types of securities that can be auctioned are,
  1. Dated government stock (Central government borrowings for 1 year to 40 years),
  2. Treasury bills or T-bills (Central government borrowings for 91, 182 and 364 days),
  3. State Development Loans (State government borrowings for 1 year to 30 years) and
  4. Sovereign Gold Bonds.
- RBI sets a maximum coupon rate or minimum price for each security in every auction and institutions bid based on this.
- The lowest coupon or highest price at which an auction gets fully subscribed becomes the 'cut-off' yield or price.
- The retail investor needs to know how to bid and can simply choose at the final cut-off price or yield that will be discovered by institutions.
- Money is collected upfront from your bank account based on the reserve price set by the RBI.
- To know more about the RBI's Retail Direct Scheme, [click here](#).

## Reference

<https://www.thehindu.com/business/Economy/log-on-to-g-secs-with-rbis-retail-direct/article38038321.ece>

# SOIL Report 2021

- The State of India's Livelihoods (SOIL) Report is an annual Report released by the ACCESS Developmental Services.
- It is an authoritative commentary on
  1. Policy and programmes of the government, potential opportunities for the poor, and
  2. Role of the private sector and the civil society in livelihoods promotion.
- It tracks the trends and analyses the environment in the sector.
- **Findings** - The 2021 Report has analysed only Farmer Producer Companies (FPCs).
- In the last 7 years, just 1-5 % of FPOs have received funding under central government schemes introduced to promote them.
- Only 5% of total registered FPOs have been able to secure the grants under Equity Grant Scheme and Credit Guarantee Scheme.
- FPOs registered under Companies Act make up a large majority of the organisations while the FPOs registered as cooperatives /societies are less in number.

## Reference

1. <https://livelihoods-india.org/publications/all-page-soil-report.html>
2. <https://knnindia.co.in/news/newsdetails/knowledge-resource/state-of-indias-livelihoods-report-2021-launched-by-nabard-chairman>

