

SATH-E

❖ Context

- Drop in children's attendance in schools, guardians forced to send away children in other places and loss of education has been observed in Odisha. One of the major reasons observed is closure of schools under SATH-E project.

❖ Key Highlights

❖ About the project

- It is a **NITI Aayog** programme.
- Project SATH-E, '**Sustainable Action for Transforming Human Capital-Education**', was launched in 2017 to identify and build **three 'role model' States** for the school education sector - **Jharkhand, Odisha and Madhya Pradesh**.
- It includes **learning enhancement programmes (remediation)**, governance reforms, teacher training, recruitment, assessment and accountability, **school consolidation**, IT-enabled monitoring of schools, coaching of academic coordinators (BRCs/CRCs), among others.
- With the onset of the Covid-19 pandemic, SATH-E adapted itself as 'Digi-SATH' to provide undeterred support via digital mediums.

❖ School Optimization

- **An average Indian government school has just 50-60 students and 1-2 teachers**, while an **average private school has about 265 students and nine teachers**.
- There are nearly **400,000 government schools with less than 50 students and just 1 or 2 teachers**.

- Research shows that such schools, also called '**sub-scale schools**' are unfit to provide the required ecosystem for high quality teaching because of the following reasons:
 - Divided teacher attention to students across multiple grades
 - High share of teacher time devoted to administrative tasks.
 - Poor infrastructure due to economic viability of any investment.
 - Low State focus on improving schools that impact fewer students.
- The National Education Policy (NEP) 2020 also recognizes the problem of small and single teacher schools.

Distance and Enrollment norms adopted for mergers in Odisha

| School Category | Enrollment criteria | | Distance of nearby Elementary/ Secondary School |
|----------------------------------|---------------------|----------------|---|
| | Non-Scheduled Area | Scheduled Area | |
| Any Primary/UP/Secondary School* | 20 or less | 20 or less | Any distance |
| Any Primary/UP/Secondary School | Any Enrollment | Any Enrollment | 100 meters |
| Primary School* | Less than 40 | Less than 25 | 1 km |
| Upper Primary School (VI-VIII) | Less than 50 | Less than 40 | 2 km |
| Upper Primary School (I-VIII) | Less than 60 | Less than 45 | 1 km |
| Secondary School (VI-X) | Less than 50 | Less than 45 | 2 km |
| Secondary School (I-X) | Less than 80 | Less than 45 | 2 km |
| Secondary School (IX-X) | Less than 60 | Less than 40 | 3 km |

- **Odisha had planned to close 14000 schools of which 4841 schools have been closed**. The closure of 8000 schools have been stayed by HC in Dec 20.
- Farm labourers and migrant workers of villages do not want to trade their time for earning wages with time for dropping their children to schools 3 km away.

Daylight Harvesting Technology

❖ Context

- Recently, the Govt said that the Ministry of Science & Technology has decided to **promote a unique Start-up in latest Daylight Harvesting Technology**.

❖ Key Highlights

- This decision will help to **reduce carbon footprint** and improve the building energy efficiency.
- This Technology will **contribute immensely to meet one of the commitments** of the five nectars of "**PANCHAMRIT**" i.e., to make India as Net Zero emission country by 2070.
- The only Start-up company in India for Daylight Harvesting Technologies "**Skyshade Daylights Private Limited**" Hyderabad signed an MoU with **Technology Development Board**, a statutory body of Department of Science & Technology.

❖ About Skyshade Daylights Private Limited

- The company is **engaged in roots starting with design & build operations of large skylight domes** for building atriums and solar thermal technologies.
- It did daylighting for a wide range of consumers from Government bodies, PSUs, Corporate to a few religious structures comprising Airport Authority of India-Chennai, PMO office South block, New Delhi, etc.
- They further plan to **daylight the religious Ayodhya Temple**.
- The company **aims to create Green & Net zero buildings and to participate and contribute in national missions** under the National Action Plan on Climate Change (NAPCC).

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❖ About Daylight Harvesting Technology

- Daylight harvesting systems **use daylight to offset the amount of electric lighting** needed to properly light a space, in order to reduce energy consumption.
- This is accomplished using **lighting control systems** that are able to **dim or switch electric lighting** in response to changing daylight availability.
- Solar energy spectrum has **45% energy as visible light** and this can be used to harvest building illumination for about **9-11 hours a day**.
- All daylight harvesting systems use a **light level sensor**, a **photosensor**, to detect the prevailing light level, luminance or brightness, in open-loop or closed-loop systems.
- Photosensors are used to **adjust electric lighting based on the available daylight in the space**.
- It is one of the **most advanced techniques** used in sustainable lighting designs for contemporary buildings.

❖ Significance

- It will-
 - Reduce carbon footprint,
 - Improve building energy efficiency.
 - Reduce electrical lighting energy consumption.
- ❖ India's Five Commitments (PANCHAMRIT) Made at COP26
 - By 2030, India to bring its **non-fossil energy capacity to 500 GW**.
 - By 2070, India will achieve **net-zero emissions**.
 - Come 2030, India will fulfil **50 per cent of its energy requirement through renewable energy**.
 - Come 2030, India will bring its **economy's carbon intensity down to 45%**.
 - By 2030, India will **reduce 1 billion tonnes of carbon emissions** from the total projected emissions.

Chip Shortage

❖ Context

- Recently, a report by **Moody's Analytics** claims that the ongoing geopolitical tension between Russia and Ukraine is going to **enhance the semiconductor chips shortage problem globally**.

❖ Key Highlights

- Palladium and Neon** are very vital items for preparing semiconductor chips.
 - Russia** supplies around **40% of the world's supply of palladium**.
 - Ukraine** produces **70% of the global supply of neon**.
 - Ukraine also supplies rare gases used to produce semiconductor fab lasers.
- During the 2014-2015 war in Ukraine, the price of neon prices went up several times.
- The global chip shortage came to the forefront during the **Covid pandemic** in 2020-21.

❖ Consequences of the Shortage

- Semiconductors chips are necessary in the likes of automobiles, mobile phones and consumer electronics.
- This means significant risks are ahead for many automakers, electronic device manufacturers, phone makers, and many other sectors that are increasingly reliant on chips for their products to work.

❖ About Semiconductor Chips

- Semiconductor chips are materials that **conduct electricity more than an insulator but less than a pure conductor**.
- They can be classified into a small number of categories including **memory chips, microprocessors, and integrated chips**.
- They act as **tiny brains for most modern electronics**.
- These are widely **used in industries like automakers, electronics (TV, Smartphone, computers etc.), data centers etc.**

❖ Key Facts about Semiconductor Industry

- It is estimated that the semiconductor industry is growing fast and can reach **\$1 trillion dollar** in this decade.
- India can grow fast and reach **\$64 billion by 2026 from \$27 billion today**.
- Mobiles, wearables, IT and industrial components are the leading segments** in the Indian semiconductor industry contributing around 80% of the revenues in 2021.
- The mobile and wearables segment is valued at \$13.8 billion and is expected to reach \$31.5 billion in 2026.

News in Between the Lines

Predatory Pricing

❖ Context

- The **Competition Commission of India (CCI)** has dismissed allegations of predatory pricing against e-commerce platform Shopee.

❖ About Predatory Pricing

- In a predatory pricing scheme, **prices are set low to attempt to drive out competitors and create a monopoly**.
- Predatory pricing **violates antitrust laws**, as it makes markets more vulnerable to a monopoly.

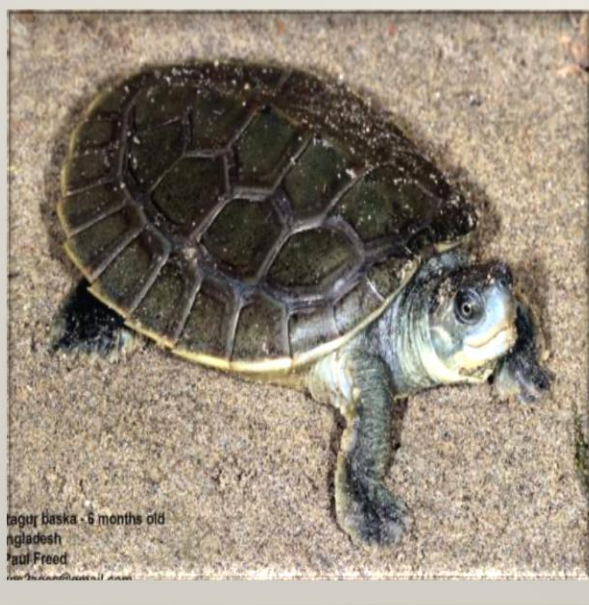
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- Consumers may benefit from lower prices in the short term, but they suffer if the scheme succeeds in eliminating competition, as this would trigger a rise in prices and a decline in choice.
- Prosecutions for predatory pricing have been complicated by the short-term consumer benefits and the **difficulty of proving the intent to create a market monopoly**.
- **Legal Provisions:**
 - Under the Indian jurisprudence, Predatory pricing is described as **'unfair or discriminatory' pricing**, and is **forbidden by law under Section 4 of the Competition Act, 2002**, which refers to the **"Abuse of a Dominant Position"**.

Batagur Baska



❖ Context

- In just six weeks after the release, at least three of the **ten individuals of the critically endangered Northern River Terrapin (Batagur baska)** have travelled hundreds of kilometers and are now in **Bangladesh**.

❖ About Northern River Terrapin (Batagur baska)

- It is presumed to be **extinct in several Southeast Asian** countries.
- It is described as the **world's second most endangered turtle** (Yangtze giant soft shell turtle being the most endangered freshwater turtle).
- **Physical features:**
 - It is a 60 cm long turtle, recognized by 4 claws in front feet whereas other turtles have 5.
- **Habitat:**
 - Terrestrial & highly aquatic (freshwater & brackish); lives in tidal areas of the estuaries of medium and large rivers and also in mangrove habitat.
- **Protection Status:**
 - **IUCN Red List - Critically Endangered (CR).**
 - **Wildlife (Protection) Act 1972 - Schedule I.**
 - **CITES - Appendix I.**
- Of six large freshwater turtles of the genus Batagur, three are found in India:
 - **Batagur kachuga** (Red-crowned roofed turtle).
 - **Batagur dhongoka** (Three-striped roofed turtle) – found in the tributaries of the Ganga, such as Chambal.
 - **Batagur baska** (The Northern river terrapin) – the most endangered of the three species.

FATF



❖ Context

- FATF has **retained Pakistan on its terrorism financing "grey list"** for failing to meet some of its targets under the additional criteria.
- The watchdog said that **Pakistan had completed 26 of the 27 action items** in the action plan that the country was given to implement.

❖ About FATF

- The FATF is an **inter-governmental body** established in 1989 during the **G7 Summit to develop policies to combat money laundering**.
- In 2001, its mandate was **expanded to include terrorism financing**.
- **Aims:**
 - Combat money laundering, terrorist financing and other related threats to the integrity of the international financial system.
- **Members:**
 - The FATF currently has **39 members** including **two regional organizations** -the European Commission and Gulf Cooperation Council.
 - India is a member of the FATF consultations and its Asia Pacific Group.



- **Secretariat:-** Paris.
- Considered in the grey list may face.
 - Economic sanctions from IMF, World Bank, ADB.
 - Problem in getting loans from IMF, World Bank, ADB and other countries.
 - Reduction in international trade.
 - International boycott.

New Gin Berry Species

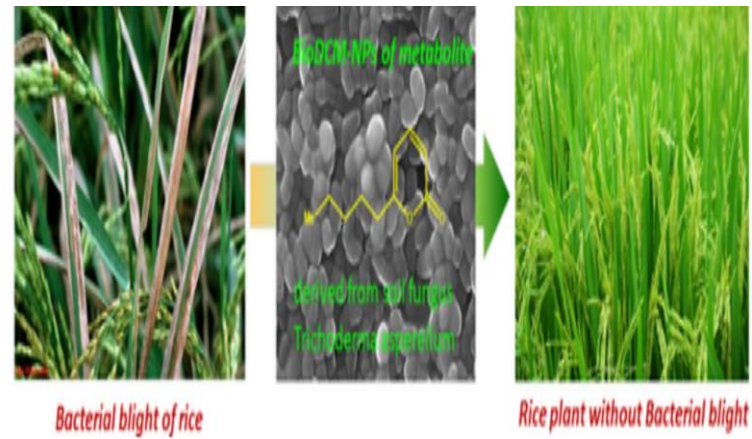


- ❖ **Context**
 - A team of scientists from the **Botanical Survey of India (BSI)** has discovered a new **gin berry species** from the **Kanyakumari Wildlife Sanctuary in Tamil Nadu**.
- ❖ **Key Highlights**
 - **Scientific Name:**
 - *Glycosmis albicarpa*.
 - **Distinct Features:**
 - The species belongs to the **Orange family Rutaceae**.
 - It, with a **distinct large white fruit**, is **endemic to the southern Western Ghats**.
 - Berries of the *Glycosmis* species have the unique **characteristic of 'gin aroma'** and gained in popularity as an edible fruit.
 - The species is also a **larval host plant for butterflies** like other species of *Glycosmis*.
 - **Significance:**
 - The discovery not only re-emphasises the **uniqueness and endemism in Western Ghats' flora** but also adds to the **growing inventory of the region's flora**.
 - Many of the related plants of these taxonomic groups are being **utilized for their medicinal values and food**.

BioDCM



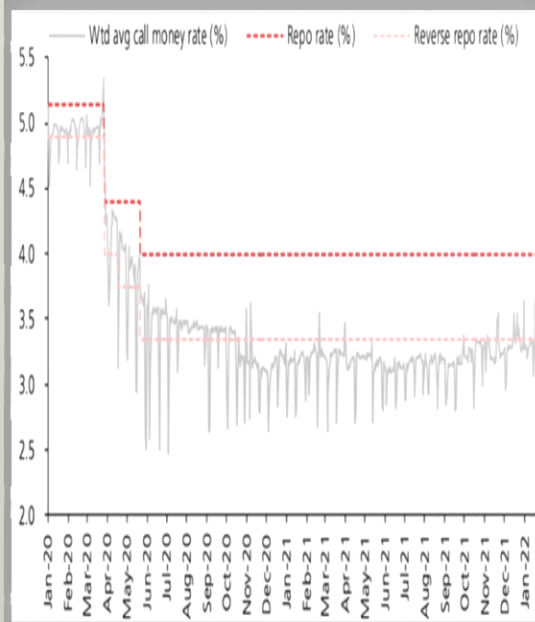
- ❖ **Context**
 - A group of scientists from the University of Hyderabad (UoH), the Indian Institute of Rice Research (IIRR) and IIT Kanpur have developed a novel nanoparticle-based **bio-degradable carbonoid-metabolite (BioDCM)**.
- ❖ **Key Highlights**
 - According to a **United Nations' Food and Agriculture Organisation (FAO) report in June 2021**, every year farmers across the world lose **up to over 40% of crops due to insects and diseases**, resulting in an estimated **loss of \$290 billion to the global economy**.
 - The invention of these novel nanoparticles would act as shields to protect crops, **rice crops (especially) from bacterial and fungal infection** and diseases without having any negative impact on soil and consumer's health.
 - A metabolite is an intermediate or end product of metabolism.
- ❖ **Advantages**
 - They act fast as it is applied in bioactive form.
 - Withstand high temperatures.
 - Helps to overcome several drawbacks, such as a lack of control over bioavailability, early degradation, and crop absorption.
 - Non-toxic, eco-friendly, and easily degradable.



(Left) paddy crop with bacterial blight. (Right) paddy crop without bacterial blight. | Source: The University of Hyderabad

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Normalisation of Monetary Policy



❖ Context

➤ Central Banks worldwide are poised to normalise their monetary policies in the wake of rising inflation.

❖ Key Highlights

- In order to boost economic activities - both consumption and production, central banks adopts “**loose monetary policy**” which includes.
 - Injecting liquidity by buying government bonds from the market.
 - Lowering interest rates which allows banks to borrow more loans and are expected to pass on the same to consumers.
- However, when inflation starts to kick in, central banks reverse their “loose money” approach and adopt “**tight monetary policy**”, that is they start increasing rates and sell government bonds to suck out the excess liquidity from the system. **USA is seeing highest inflation in 40 years.**
- **When** any central bank finds that a **loose monetary policy** has started becoming **counterproductive** (for example, when it leads to a higher inflation rate), the central bank “**normalises the policy**” by **tightening** the monetary policy stance. Thus, essentially it means transforming the policy from counterproductive to productive.

❖ Indian Context

- In COVID-times, the gap between repo and reverse repo rate has increased. Repo rate is the rate at which RBI give loans to banks and Reverse repo rate is the rate at which banks give loans to RBI and earn interest.
- It is expected that the normalisation by RBI would begin with normalisation of reverse repo rates first.
- Under normal circumstances, that is when the economy is growing at a healthy pace, the repo rate becomes the benchmark interest rate in the economy. That’s because it is the lowest rate of interest at which funds can be borrowed.
- However, when so much liquidity exists in the system, that there are no fresh takers for loans or no genuine demand for loans , banks begin to park their excess liquidity with RBI.
- Therefore, to disincentive the banks and push them to extend more fresh loans, RBI had lower the reverse repo rate and increased the gap between repo and reverse repo in COVID times.
- By first increasing the reverse repo rate, the banks will park the excess liquidity first.

Article 176



❖ Context

➤ Telangana budget session to begin without governor address.

❖ Key Highlights

- As per **Article 176 of the constitution (Special Address)**, the governor shall address the Legislative Assembly or both houses.
 - At the commencement of first session of each year.
 - The first session after general election.
- The address is followed by a discussion on the motion of thanks to the governor’s address in both the Houses, which ends with a reply by the chief minister.
- This is for the **first time that the budget session of the state assembly is commencing without the mandatory governor’s address.**
- According to the Telangana government, the coming budget session is not the first session of the year, as the **previous session which was adjourned sine die on and has not been prorogued.**
- So, technically, the same session, which is the eighth session of the second Telangana assembly, will only resume by the speaker without any need for the governor’s address.

