

Phosphorus Bomb (WP)

❖ Context

- A senior Ukrainian police officer has accused Russian forces of launching phosphorus bomb attacks in the eastern region of Lugansk.

❖ Key Highlights

❖ About White Phosphorus (WP)

- White phosphorus (or yellow phosphorus or tetraphosphorus) is **one of the allotropes** of elemental phosphorus.
- It was called "**Flaming onion**" by the Nazis.
- It was **discovered 300 years ago** when the Hamburg-based alchemist Henig Brandt boiled urine and continued to burn the residue that formed.

❖ What is an allotrope?

- **Allotropy** is the property of some of the chemical elements like carbon to exist in two or more different forms in the same physical state due to differences in bonding of atoms in the elements.
- In white phosphorus, P₄ atoms are bonded in **tetrahedral arrangement**.
- **Red phosphorus** is harmless.

❖ Properties

- It is **pyrophoric** (it is ignited by contact with air); **burns fiercely** at a temperature of above 800 degree Celsius.
- It is a **highly efficient smoke-producing agent**, reacting with air to produce an immediate blanket of **phosphorus pentoxide vapour**.

❖ Applications

- Both military and non-military:
 - **Non-military:** Fireworks, Food additives, cleaning compounds, fertilisers.
 - **Military:** Produce smoke, flushing out combatants, illumination, marking a target, as an incendiary (set fire to objects or persons).

❖ Effect on Humans

- When in contact with human skin, WP causes both **chemical and thermal burns**.
- Thermal burns are caused by the generated heat.
- Chemical burns are caused by different compounds produced through reactions like corrosive **phosphoric acid** produced when **phosphorus pentoxide** reacts with **water** in skin.

- It can be absorbed systemically into body leading to **multiple organ dysfunction syndrome**.

- If any WP remains in healing wounds, then it would reignite when re-exposed to oxygen
- Phosphorus pentoxide is a **severe pulmonary irritant**.

❖ Scope of its ban under International Conventions:

- **1993 Chemical Weapons Convention.**
 - Both WP and phosphorus pentoxide can be classified as toxic under the definition provided under the convention.
 - But its **use in military limited to illumination, create smoke screen, marking a target, setting fire to an object, is not illegal under the convention as its usage is not dependent on its toxicity.**
- **UN-CCWC (Convention on Certain Conventional Weapons):**
 - The convention is effective from 1983.
 - It has five protocols.
 - **Protocol I** restricts weapons with non-detectable fragments.
 - **Protocol II** restricts landmines, booby traps.
 - **Protocol III** restricts incendiary weapons.
 - **Protocol IV** restricts blinding laser weapons.
 - **Protocol V** sets out obligations and best practice for the clearance of explosive remnants of war.
- **WP's primary usage as incendiary in civilian areas is banned under the Protocol III.**

India Water Pitch-Pilot-Scale Start-up Challenge

❖ Context

- Recently, the Union Minister of **Housing and Urban Affairs (MoHUA)** has launched the 'India Water Pitch-Pilot-Scale Start-up Challenge' under **Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0**.

❖ Key Highlights

- New and **emerging technologies** resulting from the **thriving start-up ecosystem** in India are providing breakthrough solutions to some of the most critical challenges.
- This **ecosystem needs to be harnessed** for achieving the objectives of Atal Mission for Rejuvenation and Urban Transformation 2.0 (AMRUT 2.0).



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❖ **About the Challenge**

- **MoHUA** invites applications/ proposals from interested/ eligible start-ups to provide innovative technology, business solutions to address challenges in the urban water sector in India.
- **Aims:**
 - It aims at **empowering start-ups in the water sector** to grow through innovation and design that will drive sustainable economic growth and generate employment opportunities.
- **Thematic Areas:**
 - The start-ups need to provide innovative technological/ business solution in the following areas.
 - Freshwater systems, Hydro informatics, Used water management, Urban Water Management, Agricultural Water Management, Urban Sewerage Management, Water governance.
- **Eligibility Criteria:**
 - All entities recognised as start-ups by the **Department of Promotion of Industry and Internal Trade (DPIIT)** are eligible to participate.
- **Prize:**
 - The Ministry will select 100 start-ups to get **Rs.20 lakhs in cash** and mentorship as part of this project.

❖ **About AMRUT 2.0:**

- AMRUT 2.0 was launched by the Prime Minister in 2021.
- **Aims:**
 - To provide **central assistance for universal coverage in water supply** in all statutory towns, upscaling coverage of sewerage and septage management in 500 AMRUT cities, rejuvenation of water bodies and creation of green spaces.
 - Besides this, the mission also envisages the **identification of innovative, proven and potential environment-friendly technologies** in the fields of water & used water treatment, distribution and water body rejuvenation.
- To achieve this above goal, this challenge was launched.

News in Between the Lines

Man-Portable Air-Defence Systems (MANPADS)



❖ **Context**

- Recently, the **USA approved a \$200-million arms package for Ukraine**, which would include US-made Stinger Missile, which are a type of shoulder-fired Man-Portable Air-Defense Systems (**MANPADS**).

❖ **About MANPADS:**

- It is short-range, lightweight and portable **surface-to-air missiles**.
- **Features:**
 - It can be fired by individuals or small groups to destroy aircraft or helicopters.
 - They **help shield troops from aerial attacks** and are most effective in targeting low-flying aircrafts.
 - MANPADS can be **shoulder-fired**, launched from atop a ground-vehicle, fired from a tripod or stand, and from a helicopter or boat.
 - The missiles are **fitted with Infrared (IR) seekers** that identify and target the airborne vehicle through heat radiation being emitted by the latter.
- **Range:**
 - MANPADS have a maximum range of **8 kilometers** and can engage targets at altitudes of **4.5 km**.
- Most MANPADS have passive or **'fire and forget'** guidance systems.

Maternal Mortality Ratio

❖ **Context**

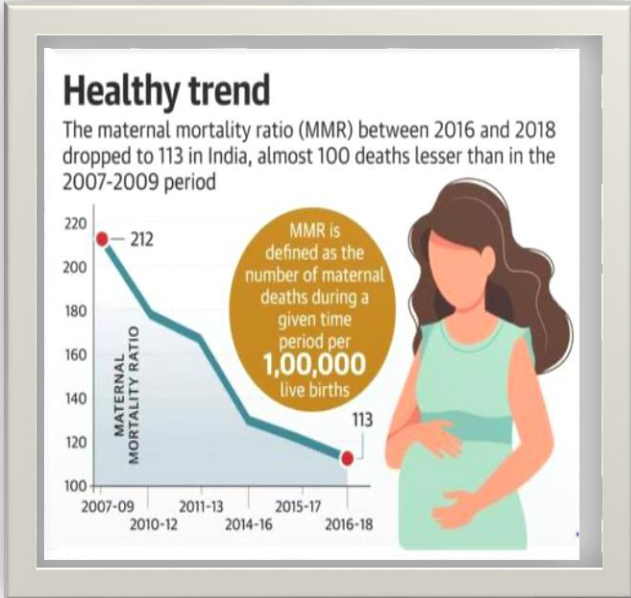
- Recently, a special bulletin was **released by the Registrar General of India** which shows that the **Maternal Mortality Ratio (MMR)** of India has **declined by 10 points**.

❖ **Key Highlights**

- It has **declined from 113 in 2016-18 to 103 in 2017-19 (8.8 % decline)**.
- The country had been witnessing a **progressive reduction** in the MMR from **130 in 2014-2016**, 122 in 2015-17, 113 in 2016-18, and to 103 in 2017-19.
- With this persistent decline, India was on the verge of achieving the **National Health Policy (NHP) target of 100/lakh live births by 2020**.

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- It is certainly on track to achieve the **Sustainable Development Goal (SDG) target of 70/ lakh live births by 2030.**
- The number of States that have achieved the Sustainable Development Goal target has now risen from **five to seven.**
 - Kerala (30) > Maharashtra (38) > Telangana (56) > Tamil Nadu (58) > Andhra Pradesh (58) > Jharkhand (61) > Gujarat (70).
- There are now nine States that have achieved the MMR target set by the National Health Policy.
 - It includes the above seven States and Karnataka (83) and Haryana (96).
- **Worst Performed States:**
 - Uttarakhand (101) < West Bengal (109) < Punjab (114) < Bihar (130) < Odisha (136) < Rajasthan (141) < Chhattisgarh (160) < Madhya Pradesh (163) < Uttar Pradesh (167) < Assam (205).
- Encouraging achievement has been reported by Uttar Pradesh -- which has shown the maximum decline of 30 points, Rajasthan (23 points), Bihar (19 points), Punjab (15 points) and Odisha (14 points).

Crime and Criminal Tracking Network and Systems (CCTNS)



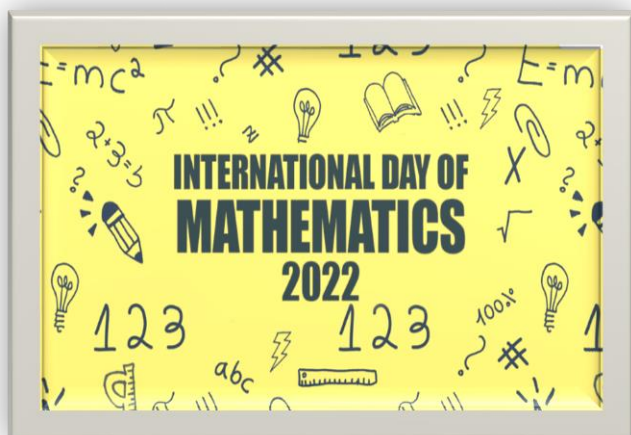
❖ Context

- Recently, the Union Home Minister said all Central agencies such as the CBI, National Investigation Agency (NIA) and the Narcotics Control Bureau (NCB) should be linked to the Crime and Criminal Tracking Network and Systems (CCTNS).

❖ About Crime and Criminal Tracking Network and Systems (CCTNS)

- CCTNS is a **Mission Mode Project** under the **National e-Governance Plan (NeGP)** of Govt. of India.
- **Started in 2009.**
- **Objective:**
 - To create a **comprehensive and integrated system** for enhancing the efficiency and effectiveness of Police.
 - To create a nationwide networked infrastructure for **evolution of IT-enabled state-of-the-art tracking system** around "investigation of crime and detection of criminals".
- **Nodal Agencies:**
 - MHA and NCRB play a key role in planning the program in collaboration with the Police leadership within States.
- It will **automate Police functions at Police Station** and at higher levels.
- It will also create facilities and mechanisms to provide public services like registration of online complaints, ascertaining the status of cases registered at the police station, verification of persons etc.
- In 2015, an additional objective of establishing a basic platform for an **Inter-operable Criminal Justice System (ICJS)** was added to the Project.

International Maths Day 2022



❖ Context

- **14th March**, every year is observed as the International Day of Mathematics which is a **global event** that celebrates mathematics and connects math with all sorts of subjects, fields, and ideas.

❖ Key Highlights

- The International Day of Mathematics is a project **led by the International Mathematical Union** with the support of numerous international and regional organizations.
- According to UNESCO, The International Day of Mathematics **aims to showcase the fundamental role played by the mathematical sciences** in the achievement of the United Nations' Sustainable Development Goals.
- This day was officially marked as International Day of Mathematics in 2019 at **UNESCO's 40th General Conference**. Earlier, March 14 (3.14) was informally celebrated as **Pi Day** by math-lovers across the world.

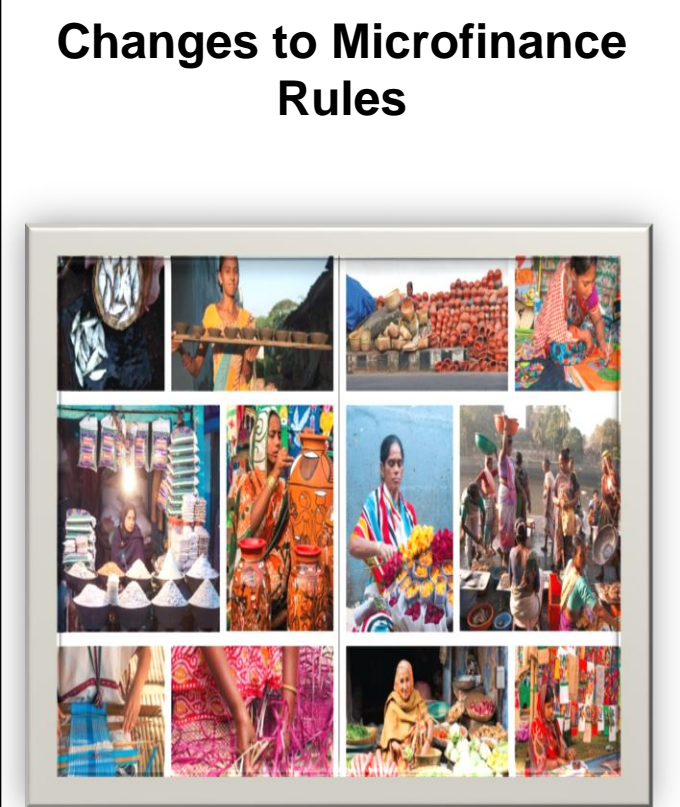
Leader of Opposition (LoP) Post



- **Objective:**
 - To **celebrate the hard work that mathematicians worldwide have put** into making the world what it is.
 - People also **raise awareness** about how to build a career in mathematics and more.

- ❖ **Context**
 - The Congress will come precariously close to losing the Leader of Opposition (LoP) post in the Rajya Sabha in the coming Rajya Sabha elections to be held on March 31.
- ❖ **About Leader of Opposition Post**
 - The **Leader of Opposition** is the leader of the largest party in the house, with **at least one-tenth** of the total number of seats.
 - **The Salaries and Allowances of Leaders of Opposition in Parliament Act of 1977** defines it as a legislative position.
 - The Act says that LoP is the Leader in that House of the party in opposition to the Government having the **greatest numerical strength** and recognised as such by the Chairman/Speaker of the House.
 - **Significance:**
 - LoP plays a crucial role in **bringing bipartisanship and neutrality to the appointments** in institutions of accountability and transparency – **CVC, CBI, CIC, Lokpal etc.**
 - It is also said that the Leader of Opposition is called the **‘Shadow Prime Minister’**. The Leader should be ready to take over if the government falls in any adverse circumstances.
 - It brings **cohesiveness and effectiveness to the opposition's functioning** in policy and legislative work.
 - **The Public Accounts Committee** is there whose chairman is Leader of the Opposition to check the expenditure of the ruling party.

Changes to Microfinance Rules



- ❖ **Context**
 - The Reserve Bank of India (RBI) has **removed caps on the pricing of small loans** given by non-banking financial company-microfinance institutions (NBFC-MFIs).
- ❖ **Key Highlights**
 - The existing guidelines prescribe a **maximum interest rate** that a microfinance lender could charge on loans. This is **10-12 percentage points above the institution's cost of funds**, or 2.75 times the average base rate of the five-largest commercial banks, whichever is lower.
 - Also, the **income caps** were kept at **₹.25 lakh in rural areas** and **₹2 lakh in other areas**.
- ❖ **Changes Made**
 - Underwriting of loans will be done on a **risk-based analysis**.
 - **Risk premium** will be charged based on the borrower.
 - A **board-approved policy** to be put in place for the **pricing** of loans.
 - The policy should include a **well-documented interest rate model** and the different interest rate components, such as cost of funds, risk premium, and margin. **Annual household income level raised to ₹3 lakh** for classification of eligibility to avail of microfinance loans.
 - Limit on the **maximum repayment value to 50%** of the monthly household income **to curtail over-lending** to customers. Thus, if the household income is ₹3 lakh, the maximum loan instalment that a borrower needs to pay cannot exceed ₹1.5 lakh per year.
 - **No prepayment penalty** on microfinance loans.
 - **Minimum requirement of microfinance loans** of total loan assets **reduced to 75 % from 85% earlier**.

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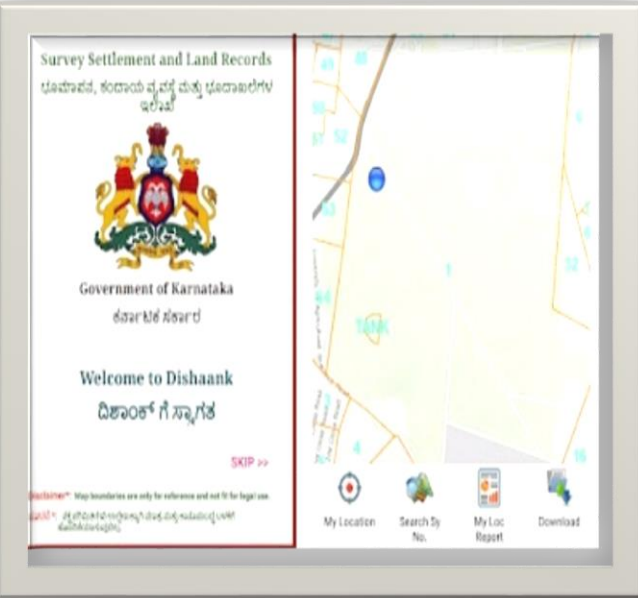
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Dishank app



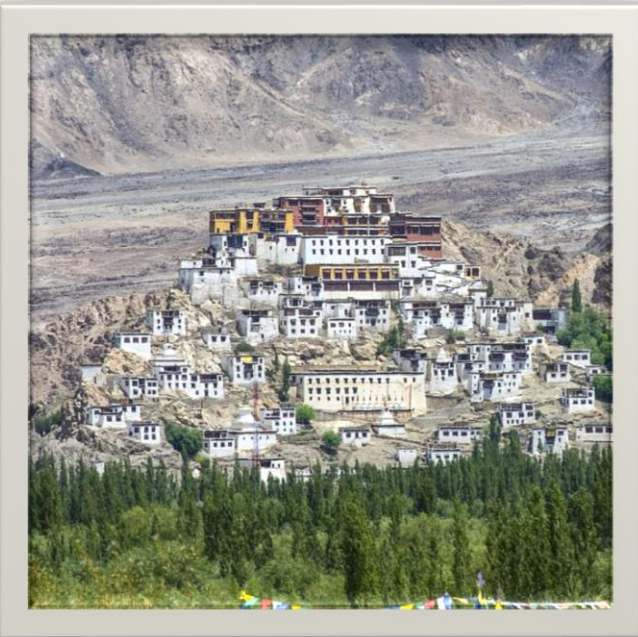
❖ Context

➤ Launched by **Land Revenue Department of Karnataka**.

❖ Key Highlights

- The mobile app makes **original land records available to individuals** on their mobiles.
- Developed under **Karnataka Geographical Information System program of Karnataka State Remote Sensing Applications Centre (KSRAC)**.
- KSRAC sources satellite data and provides it to Land Resources Department.
- It is built on **digitised versions of maps** for 70-80 lakh old parcels of land.
- Karnataka had decided to digitise all land records under the **Bhoomi project** in 1990. The department has digitised, scanned and geo-referenced land maps. The purpose of the department is only to provide **clarity to individuals and protect them from frauds or lies** of the real estate dealers and developers. The department does not allow its use for resolving legal disputes. The data provided by the app includes **name of the landowner, extent of land, type of land, restriction/litigation on land, type of ownership and other active transactions done**.

Special Status to Ladakh



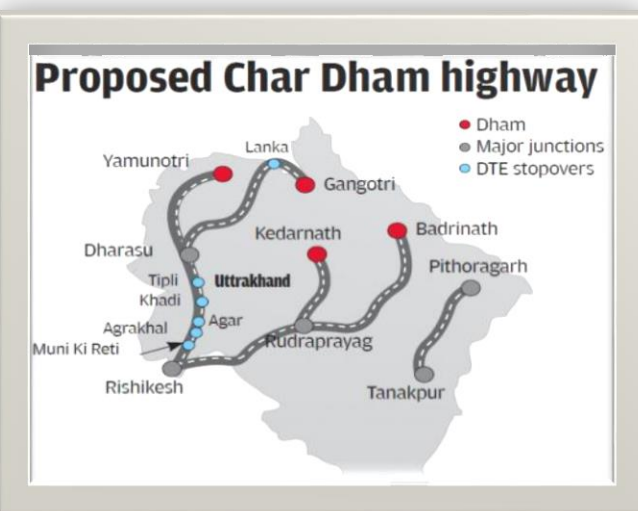
❖ Context

➤ The **Department-related Parliamentary Standing Committee** on Home Affairs has **recommended Special status** to Ladakh considering the developmental needs of the tribal population.

❖ Key Highlights

- The report also observed that **Union Territories (UTs) without legislature grossly underutilised funds allocated** to them in the past financial year, and those UTs that have a legislature performed better on the developmental front. Ladakh has been demanding statehood or at least a legislature ever since the region was turned into a UT in 2019 after its separation from the erstwhile state of Jammu and Kashmir.
- Ladakh MP has also demanded to include it in sixth schedule of the constitution. While recommending examination of the possibility of including Ladakh in the 5th/6th Schedule, the standing committee report said: **As per Census 2011, the tribal population in UT of Ladakh is 2,18,355, which is 79.61% of the total population of 2,74,289.**
- The **sixth schedule under Article 244 (2)** provides for administration of tribal areas in Assam, Tripura, Meghalaya and Mizoram through formation of Autonomous District Councils while under **Article 244(1), provisions of fifth schedule** applies to rest of the states with scheduled tribal areas.

Committee on Chardham Project



❖ Context

➤ The **Supreme Court** asked the parties to file their replies or objections, if any, on the report filed by the **High-Powered Committee**, monitoring the **Chardham Highway Project** on the widening of the roads up to **Indo-China border in Uttarakhand**. The strategic 900-km Chardham highway project aims to provide **all-weather connectivity to four holy towns - Yamunotri, Gangotri, Kedarnath and Badrinath** - in Uttarakhand.

❖ Key Highlights

- The **Supreme Court** named AK Sikri, as chairperson of the **High-Powered Committee (HPC)**, which will assess the **Chardham project's cumulative and independent impact on the entire Himalayan Valley**. In 2019, Prof. Ravi Chopra was appointed as chairperson of the HPC by the Supreme Court. Professor Ravi Chopra's resignation as chairperson of the committee was accepted by a panel of Justices DY Chandrachud and Surya Kant after he filed a letter in January requesting to quit. Chardham project's oversight committee to address **environmental complaints and other matters**.