



News Analysis (15 Oct, 2020)

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Third Assembly of ISA

Why in News

Recently, **India and France** have been re-elected as the President and Co-President of the **International Solar Alliance** (ISA) for a term of two years at the virtual third Assembly of ISA.

The first two assemblies were held in **India in 2018** and **2019**.

Key Points

- The Assembly approved institutionalising ISA's engagement with the private and public corporate sector through the **Coalition for Sustainable Climate Action** (CSCA).
- **Various solar awards** were conferred on countries as well as institutions.
 - The **Visvesvaraya award** recognises the countries with a maximum floating solar capacity in each of the four regions of ISA, which are:
 - Asia Pacific Region.
 - Africa Region.
 - Europe and others Region.
 - Latin America and Caribbean Region.
 - The **Kalpana Chawla award** for outstanding contribution of scientists and engineers working in the field of **solar energy**.
 - The **Diwakar award** recognises organisations and institutions that have been working for the benefit of differently-abled people and have maximised the use of solar energy in the host country.

- The Assembly was **presented the report prepared by the World Resources Institute (WRI) which identifies the sources of funds, opportunities and constraints, in scaling up solar investments and the contribution of ISA** in assisting Member countries.

The ISA will work with WRI to develop a roadmap for **mobilisation of USD 1 trillion by 2030.**

- In the wake of the global **pandemic**, ISA responded by setting up **ISA CARES** (like **PM-CARES** in India), an initiative dedicated to the deployment of solar energy in the healthcare sector.

The initiative **aims to solarize one primary health sector** in each district of the target member countries.

- The ISA Secretariat has launched a **Seventh Programme on Solarising Heating and Cooling systems.**
 - Demand for cooling alone outpaced solar deployment in 2017.
 - Heating and cooling systems have scope to directly convert solar radiation and at higher efficiency levels.
- **SAARC Development Fund's** technical assistance along with the **ISA Technical Assistance** is proposed to be implemented jointly with the **Asian Development Bank**.
- The ISA has recently signed a tripartite agreement with the **World Bank** and the Government of India and is now actively involved in preparing a vision and **implementation plan for “One Sun, One World, One Grid” Initiative** to harness the power of interconnected grids for enabling energy transition to a low-carbon world.
- **India's Perspective and Highlights:**
 - The President of the ISA Assembly, **India's Power and New and Renewable Energy Minister** appreciated the Alliance Members coming together to work for combating climate change.
 - He also **highlighted various activities and programmes** initiated by ISA since the 2nd Assembly like the **development of a pipeline** of more than USD 5 billion, **aggregated demand** for more than 270,000 solar pumps across 22 countries, etc.

- **France's Role:**

- France has **committed 1.5 billion Euros** for financing solar projects in ISA member states up until 2022.
- The **first project under the Solar Risk Mitigation Initiative (SRMI) is being launched in Mozambique** with the support of **France and the European Union (EU)**.
SRMI will help mobilise billions in private investment to finance more than 10 GWs of solar projects.
- In the frame of the **ISA's Solar Technology Application Resource Centre (Star-C) programme**, the **French National Institute for Solar Energy (INES)** will launch a specific program for the small island states of the Pacific.

International Solar Alliance

- It is an **Indian initiative** that was launched by the **Prime Minister of India and the President of France** on **30th November 2015 in Paris**, France on the side-lines of the **Conference of the Parties (COP-21)**, with **121 solar resource-rich countries** lying **fully or partially between the tropic of Cancer and tropic of Capricorn** as prospective members.
- **Objective:** To collectively address key common challenges to the scaling up of solar energy in ISA member countries.
- **Members:** Till now, **87 countries have signed the Framework Agreement** of the ISA and of these **67 have deposited their instruments of ratification**.
Nicaragua, a Central American country is the 87th and the latest country to sign the agreement.
- The Government of India has **allotted 5 acres of land** to the ISA in **National Institute of Solar Energy (NISE)** campus, Gurugram and has released a **sum of Rs. 160 crore** for creating a corpus fund, building infrastructure and meeting day to day recurring expenditure of the ISA up to the year 2021-22.

Source: PIB

STARS Project

Why in News

The Union Cabinet has approved implementation of the **World Bank** aided-**Strengthening Teaching-Learning and Results for States (STARS) project** with a total project cost of Rs. 5,718 crore with the financial support of World Bank amounting to about Rs. 3,700 crore.

Key Points

- The STARS project would be implemented as a new **Centrally Sponsored Scheme** under the Department of School Education and Literacy, **Ministry of Education (MoE)**.
- **Aim and Focus:** These are aligned with the objectives of **National Education Policy (NEP) 2020** of **Quality Based Learning Outcomes**.
 - **Strengthening the government-managed school education system** that primarily caters to the educational needs of girls and students from marginalised groups.
 - Focus on initiatives of **PM e-Vidya**, **Foundational Literacy and Numeracy Mission** and **National Curricular and Pedagogical Framework for Early Childhood Care and Education** as part of the **Atmanirbhar Bharat Abhiyan**.
- **Features:**
 - **Key Areas:**
 - Access and retention;
 - Right to education entitlements;
 - Quality interventions;
 - Teacher education and training;
 - Gender and equity;
 - Inclusive education; and
 - Upgradation of the learning environment.
 - **Support for Participation in PISA:** India's participation in the 2022 cycle of the **Programme for International Student Assessment (PISA)** survey will also be funded by this project.
 - **PISA** was introduced in **2000** by the **Organisation for Economic Co-operation and Development** (OECD).
 - It tests the learning levels of 15-year-old children in reading, mathematics, and science. The test is conducted every three years.
 - **India stayed away from PISA in 2012 and 2015** on account of its dismal performance in 2009, when it was placed 72nd among the 74 participating countries. The government decided to end the boycott in 2019.

- **Major Components:**

- **At the national level:**

- To strengthen the **national data systems** of the Ministry of Education (MOE) to capture robust and authentic data on retention, transition and completion rates of students.
 - To support the strengthening of **learning assessment systems**.
 - **PARAKH: Establishment of PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development) as a National Assessment Centre.**

Included in NEP, this **independent and autonomous** institution under the MOE **will set standards for the around 60 examination boards** in the country.

- **Contingency Emergency Response Component (CERC):** It will help the government respond to situations leading to loss of learning such as school closures/infrastructure damage, inadequate facilities and use technology for facilitating remote learning etc.

The CERC component would facilitate:

1. The **rapid re-categorization of financing** (to provide flexibility in the crisis situation).
2. The **utilization of streamlined financing** request procedures (so that delays in financing is eliminated).

- **At the State level:**

The project seeks to **improve education outcomes** and **school-to-work transition strategies** for better labour market outcomes in **6 states: Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha.**

Way Forward

- The STARS programme builds on the long partnership between India and the World Bank for strengthening public school education and to support the country's goal of providing 'education for all'.
- STARS will support India's renewed focus on addressing the 'learning outcome' challenge and help students better prepare for the jobs of the future – through a series of reform initiatives.

Source: PIB

India's Public Debt Ratio

Why in News

As per the **International Monetary Fund (IMF)**, India's public debt ratio is **projected to jump by 17 percentage points to almost 90%** because of an **increase in public spending due to Covid-19**.

India's public debt ratio has **remained stable at about 70% of the Gross Domestic Product (GDP)** since **1991**.

Key Points

- **Increase in Public Debt Ratio:**

- The increase in **public spending**, in response to Covid-19, and the **fall in tax revenue and economic activity**, will make the public debt ratio jump by 17 percentage points.
- The ratio is **projected to stabilise in 2021**, before slowly declining up to the end of the projection period, in 2025.

The **pattern of public debt in India is close to the norm around the world**.

- This debt-to-GDP ratio is the metric **comparing a country's public debt to its Gross Domestic Product (GDP)**. It is often **expressed as a percentage**.
- By comparing what a country owes (debt) with what it produces (GDP), the debt-to-GDP ratio reliably **indicates a particular country's ability to pay back its debts**.
- A **country with a high debt-to-GDP ratio** typically has **trouble paying off public debts**.

- **Assessment of Fiscal situation** (relating to taxation, public spending, or public debt):
 - India has been an **important source of growth in the world since the 1991 economic liberalisation reforms**.
 - **Real GDP growth** averaged **6.5%** between **1991 to 2019**, and **real GDP per capita was multiplied by four** over that period.

Real GDP is calculated in a way such that the goods and services are evaluated at some constant set of prices. **Nominal GDP**, on the other hand, is simply the value of GDP at the current prevailing prices.
 - This impressive growth performance helped **lift millions of people out of extreme poverty**.
 - The extreme poverty rate, **measured as the proportion of people whose income is less than \$1.90 a day at purchasing power parity** (the international poverty line), fell from 45% in 1993 to 13% by 2015.
 - India **achieved the millennium development goal of halving poverty by 2015** (from its 1990 level).
 - India has made astonishing progress in other areas. **Education** enrollment is nearly universal for primary school. **Infant mortality rates** have been halved since 2000. **Access to water and sanitation, electricity, and roads** has been greatly improved.

Way Forward

- In the near-term, **additional fiscal action should be deployed** as needed to support the poor and the vulnerable. This should be **accompanied by a credible medium-term fiscal consolidation plan** that can reinforce market confidence and structural reforms that boost India's growth potential.
- The effects of Covid-19 on health, education, poverty and nutrition render progress towards the Sustainable Development Goals even more urgent. **Macroeconomic and financial stability** are important necessary conditions for **sustainable development**.

Source: TH

Pakistan Re-elected to the UNHRC

Why in News

Pakistan is currently serving on **the United Nations Human Rights Council (UNHRC)** since 1st January, 2018. With its re-election, Pakistan will continue as a member for another **three-year term commencing on 1st January, 2021**.

A total of **Fifteen countries were elected to the 47-nation council**. Russia and Cuba were elected unopposed. Pakistan, Uzbekistan, Nepal and China were elected from the Asia-Pacific region.

Key Points

- Pakistan has been re-elected despite **opposition from activist groups** over its abysmal human rights records. This is the **fifth time** that Pakistan has been elected to the UNHRC.

According to the British Government's **Foreign and Commonwealth Office Report** titled '**Human Rights and Democracy**', there were serious human rights concerns and violations in Pakistan in 2019, including restrictions on civic space and freedom of expression, intolerance and direct and open discrimination towards minorities.
- **Concerns:**
 - **Countries with Dubious Record:** With a number of countries with questionable rights records being elected, the current system of entry to **UNHRC is in serious need of reform.**

The election of states such as **China and Russia** “damages the reputation of the HRC, its standing within the international human rights committee and beyond”.
 - **Non-competitive Elections:** Problem of election without opposition.
 - For example, the Eastern European group had two available seats but only two countries were nominated to fill those positions, meaning there was no competition for the spots.
 - Except for the Asia-Pacific contest, the election of 15 members to the 47-member Human Rights Council was decided in advance because all the other regional groups had **unopposed states**.
- **The Other View:** Electing nations with dubious human rights records has some **positives**.

There is a silver lining to repressive countries being elected to the council – their position as the supposed guardian of human rights makes it far **more difficult for them to hide their own human rights abuses**.

United Nations Human Rights Council (UNHRC)

- It was established in **2006**.
- **Headquarter:** Geneva, Switzerland
- **Aim:** Promoting and protecting human rights around the globe, as well as investigating alleged human rights violations.

- **Features:** The UNHRC has **47 members** elected for staggered three-year terms on a regional group basis from 5 groups.
 - **Membership:** To become a member, a country must receive the votes of at least 96 of the 191 states of the UN General Assembly (an absolute majority).
 - According to **Resolution 60/251**, which created the council, members are elected directly by secret ballot by the majority of the UN General Assembly. Membership has to be **equally distributed geographically**.
 - **Five regional groups for membership:** Africa, Asia-Pacific, Latin America and the Caribbean, Western Europe and Eastern Europe.
 - The members are elected for a period of **three years**, with a **maximum of two consecutive terms**.
 - **Sessions:** The UNHRC holds **regular sessions** three times a year, in March, June, and September.
 - The council also carries out the **Universal Periodic Review** of all UN member states, which allows civil society groups to bring accusations of human rights violations in member states to the attention of the UN.

Way Forward

- The USA withdrew from the UNHRC in 2018 citing its ineffectiveness and bias. For India it is a testing time as Pakistan got re-elected despite dubious status regarding human rights.
- However, India's commitment towards respecting institutions of global governance mandates to have a critical voice against some events instead of quitting the membership without reasons backed by principles.

Source: TH

DAY-NRLM Special Package for J&K and Ladakh

Why in News

Recently, the Union Cabinet has approved a **special package worth Rs. 520 crore** in the Union Territories (UTs) of Jammu and Kashmir (J&K) and Ladakh for a period of five years under the **Deendayal Antyodaya Yojana-National Rural Livelihood Mission** (DAY-NRLM).

Key Points

- The decision is in line with **Centre's aim to universalise all centrally sponsored beneficiary-oriented schemes in J&K and Ladakh** in a **time-bound** manner.

- The package has been approved for a **period of five years till the financial year 2023-24** and it has been decided to ensure **funding on a demand-driven basis without linking allocation with poverty ratio** during the extended period.
Around **two-third rural women** from the UTs will be covered and **10.58 lakh women will get the benefit** from the special package.
- The step was **based on the outcomes of an evaluation** pointing to the potential of the Mission to improve the quality of life of rural households and women empowerment under the changed circumstances in the UTs of J&K and Ladakh.

Deendayal Antyodaya Yojana-National Rural Livelihood Mission

- It is a **centrally sponsored programme**, launched by the **Ministry of Rural Development in June 2011**.
- **Aim:**
 - To **eliminate rural poverty** through the **promotion of multiple livelihoods and improved access to financial services** for the **rural poor households** across the country.
 - To **reach out to all rural poor households and impact their livelihoods**.
- **Functioning:**
 - It involves **working with community institutions** through **community professionals in the spirit of self-help** which is a unique proposition of DAY-NRLM.
 - It impacts the livelihoods through **universal social mobilization by inter alia organising one-woman member from each rural poor household into Self Help Groups (SHGs)**, their training and capacity building, facilitating their micro-livelihoods plans, and enabling them to implement their livelihoods plans through accessing financial resources from their own institutions and the banks.
- **Implementation:**
It is implemented in a **Mission mode by special purpose vehicles** (autonomous state societies) with **dedicated implementation support units** at the national, state, district and block levels, using **professional human resources** in order to provide **continuous and long-term handholding support** to each rural poor family.
- **Support Provided:**
 - There were **63 lakh SHGs comprising seven crore women members** in the country which had been **granted Rs. 3 lakh crore in loans** and the **non-performing assets (NPA)** amounted to **only 2.3%**.
 - The **outstanding loans** were to the tune of Rs. 1 lakh crore.
 - The government **plans to take the scheme to 10 crore women**.

Pulse Release from Buffer Stocks

Why in News

The Union government **plans to release 40,000 tonnes of tur dal** from its buffer stock into the retail market in small lots, in a bid to cool down the recent hike in pulses prices.

Key Points

- **Hiking Prices:**
 - Major **consuming centres** (Andhra Pradesh, Kerala, Maharashtra, Bihar and Tamil Nadu) **of urad and tur dal** have seen a **20% spike in prices** over the last two weeks alone.

These states have **expressed an interest in buying one lakh tonnes of pulses** from the Central buffer stock at the MSP rates to sell at subsidised prices.
 - At an all-India level, the **average retail prices of urad** have shot up **almost 40% in comparison to 2019**, while the **average retail prices of tur dal** have **increased by almost 24%**.
- **Retail Intervention:**
 - The **Department of Consumer Affairs (DoCA)** has introduced retail intervention, a mechanism to use the buffer stock of the **National Agricultural Cooperative Marketing Federation of India (NAFED)**.
 - NAFED procures pulses from farmers at **Minimum Support Price** (MSP) rates to moderate retail prices by supplying pulses to the States and the Union Territories.
 - The States are supplied pulses either in bulk or in retail packs for supply through the ration shops of the **Public Distribution System** (PDS), or through milk and vegetable outlets run by the government or cooperatives.
 - For such retail intervention, **offer prices are fixed on the basis of MSP itself**.
 - This move will also help clear NAFED's existing stock to make way for procurement from this season's harvest, due to arrive in markets soon.

- **Using Open Market Sale:**

Apart from the retail intervention, the DoCA has also **decided to release 40,000 metric tonnes of tur from the buffer stock in Open Market Sale (OMS) Scheme** in small lots so that the releases may reach the retail market at a faster pace and help in cooling off rising prices.

- **Earlier Measures:**

- The Centre extended the procurement window for its **Price Support Scheme (PSS) up to 90 days from the date of commencement** of the scheme in each State.

The PSS is **operationalised on the State governments' request** when the prices fall below the MSP.

- The Centre promised to provide **one kg of pulses per month to all families with ration cards for the three months** as part of a **Covid-19 relief package** (Pradhan Mantri Garib Kalyan Yojana).

National Agricultural Cooperative Marketing Federation of India

- It is registered under the **Multi-State Cooperative Societies Act, 2002**.
- It was **set up in 1958** with the objective to **promote cooperative marketing of agricultural produce to benefit the farmers**.
- **Agricultural farmers are the members** of the General Body of NAFED, who participate in the decision-making process.

Minimum Support Price

- It is the **rate at which the government buys grains from farmers**.
- The reason behind the idea is to **counter the price volatility** of agricultural commodities **due to the factors like** variations in the supply, lack of market integration and information asymmetry.
- It is fixed on the recommendations of the **Commission for Agricultural Costs and Prices (CACP)**.

Open Market Sale Scheme

- **Food Corporation of India** (FCI) sells surplus stocks of wheat and rice at **predetermined prices through e-auction in the open market** from time to time to **enhance the supply** of food grains.
- It is done especially **during the lean season to moderate the open market prices** in the deficit regions.

Way Forward

- Food and nutrition security is ensured if all of the citizens of a nation have enough nutritious food available, all of them have the capacity to buy food of acceptable quality and there is no barrier on access to food.
- The right to nutritious food is a well-established principle of international human rights law. It has evolved to include an obligation for state parties to respect, protect and fulfil their citizens' right to food and nutrition security.

Source: TH

Parasitic Infections in One-Horned Rhinoceros

Why in News

Recently, the **World Wildlife Fund (WWF)** India has published reports titled '**Prevalence of Endoparasitic Infections in Free-Ranging Greater One-Horned Rhinoceros**' for Assam and West Bengal.

Key Points



- **Poaching** is believed to be the **main cause of death** in rhinos, however, they also die of natural causes which have not been studied in great detail.
- Since **2017**, the **Rhino Task Force of Assam** and **WWF India** have been undertaking steps to study pathogens found in fresh rhino dung samples in Assam, Uttar Pradesh, and West Bengal.

Before this, there was no systematic study on the prevalence of disease-causing parasites and diseases caused by these in the rhino population in India.
- According to the researchers, **habitat degradation** can lead to an **increased exposure to pathogens**.

Due to increasing livestock pressure on protected areas, there is a possible threat of pathogens getting transferred from domestic animals to wild animals.

- From the samples from Assam and West Bengal, the study concluded that **parasites from four genera were present in an estimated 68% of India's rhino population.**

The **overall prevalence of endoparasites** was **58.57%** in Assam and **88.46%** in West Bengal; results from UP are pending.

Endoparasites are parasites that live in the tissues and organs of their hosts, such as tapeworms, flukes, and protozoans of vertebrates.

Greater One-Horned Rhino

- There are **three species of rhino in Asia** — **Greater one-horned** (*Rhinoceros unicornis*), **Javan** and **Sumatran**.
- **Poaching** for the horns and **habitat loss** are the two greatest threats to the survival of Asia's rhinos.
- The **five rhino range nations** (**India, Bhutan, Nepal, Indonesia and Malaysia**) have signed a declaration 'The New Delhi Declaration on Asian Rhinos 2019' for the conservation and protection of the species.
- **Protection Status:**
 - **Javan and Sumatran Rhino** are **critically endangered** and the **Greater one-horned (or Indian) rhino** is **vulnerable** in **IUCN Red List**.
 - All three listed under **Appendix I (CITES)**.
 - **Greater one-horned rhino** is listed under the **Schedule I of the Wildlife Protection Act, 1972**.
- **Habitat of Greater One-Horned Rhino:**
 - The species is restricted to small habitats in Indo-Nepal terai and northern West Bengal and Assam.
 - In India, rhinos are mainly found in **Kaziranga NP, Pobitora WLS**, Orang NP, Manas NP in Assam, Jaldapara NP and Gorumara NP in West Bengal and **Dudhwa TR** in Uttar Pradesh.
- **Conservation Efforts by India:**
 - Recently, the **Ministry of Environment Forest and Climate Change (MoEFCC)** has begun a project to create **DNA profiles of all rhinos** in the country.
 - **National Rhino Conservation Strategy:** It was launched in 2019 to conserve the greater one-horned rhinoceros.
 - **Indian Rhino Vision 2020:** Launched in 2005, it is an ambitious effort to attain a wild population of at least 3,000 greater one-horned rhinos spread over seven protected areas in the Indian state of Assam by the year 2020.

Source: IE

Why in News

The **Ministry of Health and Family Welfare** launched the **second phase** of “**Thalassemia Bal Sewa Yojna**” for the **underprivileged Thalassemic patients**.

Key Points

- The **Hematopoietic Stem Cell Transplantation (HSCT)** program was launched in **2017** and is funded by **Coal India Corporate Social Responsibility (CSR)**. It will be **extended** for next two years from 2020.
 - **HSCT** refers to the **transplantation of stem cells** from various sources (bone marrow, growth factor–stimulated peripheral blood, and umbilical cord blood) for the treatment of various diseases like autoimmune, and genetic diseases.
 - **Hematopoietic Stem Cell:** It is an immature cell that can develop into all types of blood cells, including white blood cells, red blood cells, and platelets. Hematopoietic stem cells are found in the peripheral blood and the bone marrow. Also called blood stem cell.
- **Objective:** It aims to provide a **one-time cure opportunity for Haemoglobinopathies like Thalassaemia and Sickle Cell Disease** for patients who have a matched family donor.
- **Eligibility:** Only patients whose **monthly family income is below Rs 20,000** will be eligible for this assistance.
- The scheme has been extended to cover **Aplastic Anaemia patients** (lack of blood cell production in body).
- **Funding:** The CSR initiative was targeted to provide financial assistance to a total of 200 patients by providing a package cost not exceeding **rupees 10 lakhs per HSCT**.
- **Statistics:** It is estimated 10,000 to 12,000 children are born with thalassemia every year in India.
 - Data on the prevalence of **silent carriers** (persons without symptoms but potential to transmit to offsprings) for various Haemoglobinopathies show that silent carriers are **2.9-4.6% for Thalassemia**, while it can be as high as **40% for sickle cell anaemia** especially among the tribal population.
 - Haemoglobin variants like **Hemoglobin E (HBE)** - deformed hemoglobin- in **eastern India** can be as common as **3-50%** which calls for more attention to these diseases.

Thalassemia

It is a **genetic blood disorder** that causes the body to have less hemoglobin than normal. Hemoglobin enables red blood cells to carry oxygen. Thalassemia can cause anemia, leading to fatigue.

Sickle Cell Disease

- It is an inherited disease caused by defects, called mutations, in the beta globin gene that helps make hemoglobin. The red blood cells become hard and sticky and look like a C-shaped farm tool called a “sickle”. The **sickle cells die early**, which causes a **constant shortage of red blood cells**.
- **World Sickle Cell Day 2020** was observed to increase awareness about the Sickle Cell Disease (SCD) at the national level.

The day is recognised by the **United Nations** and celebrated every year on **19th June**.

Source: PIB

Madhuca Diplostemon: Rediscovered in Kerala

Why in News

Recently, ***Madhuca diplostemon*** tree has been rediscovered after a gap of more than 180 years from a sacred grove in **Kollam district, Kerala**.



Key Points

- The tree is locally known as ***Kavilippa*** in Malayalam.
- It has been identified by the scientists at the **Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) at Palode, Kerala**.
- The **threatened species of the Western Ghats** was believed to be extinct.

- This is the **second time** a tree of this species has ever been located and **only one mature tree has been found so far**, which makes this remarkable rediscovery **extremely valuable from a scientific, environmental and conservation point** of view.
 - In **1835, Robert Wight, a surgeon-botanist with the East India Company**, found the first specimen.
 - Since its original collection, specimens of the tree were never collected again, neither from its locality nor elsewhere, and botanical explorations in Eastern and Western Ghats failed to locate the species.
- The **International Union for Conservation of Nature** (IUCN) has included it in the **endangered** species list.

However, since there is only one specimen left in a single locality, it is **eligible to be categorised** as '**Critically Endangered**'.
- The JNTBGRI is planning to undertake the **ex-situ conservation** of this species through the **institute's species recovery programme**.

Source: TH

Holographic Imaging Based Method

Why in News

Scientists from New York University have developed a **method using holographic imaging to detect both viruses and antibodies**.

Holography is a process that **creates three-dimensional images called holograms** using laser beams, the properties of interference and diffraction, light intensity recording, and illumination of the recording.

Key Points

- **About the Method:**
 - **It uses laser beams to record holograms of the specially prepared test beads.**
 - The **surfaces of the beads are activated with biochemical binding sites** that attract either antibodies or virus particles, depending on the intended test.
 - Binding antibodies or viruses **causes the beads to grow** by a few billionth parts of a metre.
 - Researchers **detect this growth through changes in the beads' holograms. The test can analyse a dozen beads per second.**

- **Significance:**

- The method can test either for the virus (current infection) or antibodies (immunity).
- The breakthrough has the potential to **aid in medical diagnoses**, and specifically, those related to the **Covid-19 pandemic**.
- If fully realised, this proposed test could be done in under **30 minutes**, is highly accurate, and can be performed by minimally trained personnel.

Source: IE
