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News Analysis (15 May, 2020)

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Economic Stimulus-II

Why in News

Recently, the Union Finance Minister announced the short term and long-term measures for supporting the poor, including migrants, farmers, tiny businesses and street vendors as part of the second tranche of **Atmanirbhar Bharat Abhiyan**.

- The announced measures also form a part of the ₹20 lakh crore economic stimulus package to deal with the **Covid-19 pandemic**.
- Earlier, the **Economic Stimulus-I** was announced which includes both **liquidity financing** measures and **credit guarantees**.

Key Points

- **Free Food Grains Supply**
 - **Allocation of additional food grain** to all the States/UTs (5 kg per migrant labourer and 1 kg chana per family per month) for **two months** (May and June, 2020) **free of cost**.

This move is an extension of the **Pradhan Mantri Gharib Kalyan Yojana**.
 - **Eligibility:** Migrant labourers **not covered under National Food Security Act** (NFSA), 2013 or **without a ration card** in the State/UT in which they are stranded at present.

There are an estimated 8 crore migrant workers, housed in government and privately run relief camps across the country since the lockdown.
 - The entire **outlay of ₹3500 crore** will be borne by the Government of India.

- **One Nation One Ration Card**
 - 67 crore beneficiaries covering 83% of **Public Distribution System** (PDS) population will be covered by National portability of Ration cards by August, 2020 and 100% National portability will be achieved by March, 2021.
 - **One Nation One Ration Card** is part of **Technology Driven System Reforms** and will enable migrant workers and their family members to **access PDS benefits from any Fair Price Shop** in the country.
 - This will ensure that the people in transit, especially migrant workers can also get the PDS benefit across the country.
- **Scheme for Affordable Rental Housing Complexes for Migrant Workers and Urban Poor**
 - This scheme will be launched soon and under this, the Central Government will **provide ease of living at affordable rent.**
 - Under this:
 - Government funded houses in the cities will be converted into **Affordable Rental Housing Complexes** (ARHC) under **PPP mode (Public Private Partnerships)** through concessionaires.
- **Interest Subvention for Shishu MUDRA loanees**
 - Government of India will provide **Interest subvention of 2%** for prompt payees for a **period of 12 months** to **MUDRA Shishu** loanees, who have **loans below ₹50,000.**
 - The current portfolio of MUDRA Shishu loans is around ₹1.62 Lakh crore. This will provide **relief of about ₹1,500 crore to Shishu MUDRA loanees.**
- **Credit Facility for Street Vendors**
 - A scheme will be launched to **facilitate easy access to credit to Street vendors** and **enable them to restart** their businesses.
 - It is expected that **50 lakh street vendors will be benefited** under this scheme and **credit of ₹5,000 crore would be provided.**
 - Bank credit facilities for initial working capital up to ₹10,000 for each enterprise will be extended.
- **Extension of Credit Linked Subsidy Scheme**
 - The **Credit Linked Subsidy Scheme** for **Middle Income Group** (MIG, **annual income between ₹6 and ₹18 lakhs**) will be **extended up to March 2021.**
 - This subsidy scheme comes under the **Pradhan Mantri Awas Yojana (Urban).**
 - This will **benefit 2.5 lakhs middle income families** during 2020-21 and will lead to **investment of over ₹70,000 crore** in housing sector.
 - This will create a significant number of jobs by giving a boost to the Housing sector and will stimulate demand for steel, cement, transport and other construction materials.

- **Creating Employment using CAMPA Funds**
 - Approximately **₹6,000 crore of funds** under **Compensatory Afforestation Management & Planning Authority** (CAMPA) will be used.
 - The funds will be **utilised in** afforestation and plantation works, artificial regeneration, forest management, soil & moisture conservation works, forest protection, forest and wildlife related infrastructure development, wildlife protection and management etc.
 - Government will **grant immediate approval** to these plans which will create job opportunities in urban, semi-urban and rural areas and also for Tribals.
- **Additional Emergency Working Capital through NABARD**
 - **National Bank for Agriculture and Rural Development** (NABARD) will **extend additional re-finance support of ₹30,000 crore** for meeting crop loan requirements of **Rural Cooperative Banks** (RCBs) and **Regional Rural Banks** (RRBs).
 - This **refinance** will be **front-loaded** (uneven distribution with a greater proportion at one time and smaller ones at other time) and **available immediately**.
 - This is **over and above ₹90,000 crore** that will be provided by NABARD to this sector in the normal course.
 - This will **benefit around 3 crore farmers**, mostly small and marginal and will meet their post-harvest Rabi and current Kharif requirements.
- **Credit Boost to Kisan Credit Card Scheme**
 - It is a special drive to provide concessional credit to **Pradhan Mantri Kisan Samman Nidhi** (PM-KISAN) beneficiaries through **Kisan Credit Cards**.
 - It will inject **additional liquidity of ₹2 lakh crore** in the farm sector.
 - **2.5 crore farmers will be covered** and fisherman and animal husbandry farmers will also be included in this drive.

Criticism

- Economists say that this intervention was **too little, too late**, and that the free foodgrain provision **should have been universalised** to deal with widespread distress.
- There are 50 crore people in the country without ration cards, of which 10 crore are legally entitled to PDS grain under NFSA. Of the rest, there are many people who were managing in normal times, vegetable vendors, gig economy workers, autorickshaw drivers, who are in dire straits now. **PDS needed to be extended to all these people** at this time.
- Economists have asked the government for a **one-time cash transfer to vulnerable sections** like migrant labourers.

- There were no steps taken to extend **Mahatma Gandhi National Rural Employment Guarantee Act** (MGNREGA) employment guarantee to at least 200 days.
Currently, MGNREGA aims to provide **at least 100 days** of wage employment.

Source: PIB

Deforestation Rate Declined

Why in News

According to the **Global Forest Resources Assessment 2020 (FRA 2020) report**, the rate of forest loss has declined in the period of 1990-2020.

- The FRA is released by the **United Nations Food and Agriculture Organization (FAO)**.
- The FRA 2020 is **based on the assessment** of more than **60 forest-related variables in 236 countries** and territories in the period of 1990–2020.

Key Points

- **Total forest area:** The world's total forest area is 4.06 billion hectares (bha), which is 31% of the total land area. This area is equivalent to 0.52 hectares per person.
- **Top countries in forest cover** — the **Russian Federation, Brazil, Canada, the United States of America and China** constituted more than 54% of the world's forests.
- **Forest loss:** According to the report, the **world has lost 178 million hectares (mha) of forest since 1990**, an area the size of Libya.
- **Decline in rate of forest loss:** The rate of net forest loss decreased substantially during the period of 1990–2020.
 - It was 7.8 mha per year in the decade 1990–2000, 5.2 mha per year in 2000–2010 and 4.7 mha per year in 2010–2020.
 - This is due to a **reduction in deforestation in some countries**, plus **increases in forest area in others** through afforestation and the **natural expansion of forests**.
- **Areas that witnessed forest loss:** **Africa** had the **largest annual rate of net forest loss** in 2010–2020, at 3.9 mha, **followed by South America**, at 2.6 mha.
- **Areas that witnessed forest gain:** **Asia** had the **highest net gain of forest area** in 2010–2020, **followed by Oceania and Europe**.
However, Oceania experienced net losses of forest area in the decades 1990–2000 and 2000–2010.

- **Types of forest loss:** The largest proportion of the world's forests are tropical (45%), followed by **boreal, temperate and subtropical**.
Naturally regenerating forest areas worldwide **decreased** since 1990, but the area of **planted forests has** increased.
- **Plantation forest** cover is 131 mha, about 3% of the global forest area.
The **highest percent** of plantation forests are in **South America** while the **lowest are in Europe**.
- **Protected forest areas** worldwide estimate around 726 mha.
 - **South America** has the highest share of forests in protected areas, at 31%.
 - The protected forest areas increased by 191 mha since 1990.

Global Forest Resources Assessment

- The FRA presents a comprehensive view of the world's forests and the ways in which the resource is changing.
- It supports the development of sound policies, practices and investments affecting forests and forestry.

Food and Agriculture Organization (FAO)

- The Food and Agriculture Organization is an **agency of the United Nations** that leads international efforts to defeat hunger.
- FAO is also a source of knowledge and information and helps developing countries and countries in transition to modernize and **improve agriculture, forestry and fisheries practices and ensure good nutrition and food security** for all.
- **Formation:** 16th October 1945
- **Headquarters:** Rome, Italy

Source: DTE

Z-scan Method for Parkinson's Disease

Why in News

Recently, scientists from IIT (Indian School of Mines) Dhanbad and **CSIR**-Indian Institute of Chemical Biology (Kolkata) have developed the **Z-scan method** to monitor the **origin as well as the progression of Parkinson's disease** in human beings.

Parkinson's Disease

- Parkinson's disease is a chronic, degenerative neurological disorder that **affects the central nervous system**.

- It **damages nerve cells** in the brain **dropping** the levels of **dopamine**. Dopamine is a chemical that sends behavioural signals from the brain to the body.
- The disease causes a variety of "motor" symptoms (symptoms related to movement of the muscles), including rigidity, delayed movement, poor balance, and tremors.
- Medication can help control the symptoms of the disease but **it can't be cured**.
- It affects the age group from **6 to 60 years. Worldwide**, about **10 million people** have been affected by this disease.

Key Points

- **Aggregation of ASyn:**
 - An aggregation of a protein called **Alpha-synuclein (ASyn)** plays a crucial role in the development of Parkinson's disease.
 - Protein aggregation is a biological phenomenon in which destabilized proteins aggregate (i.e., accumulate and clump together) leading to many diseases.
 - Alpha-synuclein is a protein found in the human brain, while smaller amounts are found in the heart, muscle and other tissues.
 - In the brain, alpha-synuclein is found mainly at the tips of neurons in specialized structures called presynaptic terminals.
 - Presynaptic terminals release chemical messengers, called neurotransmitters.
 - The release of neurotransmitters relays signals between neurons and is critical for normal brain function.
- **Use of Z-scan Method:**
 - The discovered Z-scan method is expected to help in **monitoring both the early as well as late stages of the aggregation of ASyn and death of neuronal cells**.
 - Until now, worldwide studies could not establish any strong relation between ASyn aggregations and subsequent death of neuronal cells observed in Parkinson's disease.

CSIR-Indian Institute of Chemical Biology

- Indian Institute of Chemical Biology (IICB) was established in **1935 as the first non official centre in India** for **biomedical research** and was included within the aegis of Council of Scientific and Industrial Research (CSIR) in 1956.
- It is located in **Kolkata (West Bengal)**.
- CSIR-IICB is engaged in research on diseases of national importance and biological problems of global interest and also helps to maintain momentum in life science research.

- It conducts research in a variety of areas including chemistry, biochemistry, cell biology, molecular biology, neurobiology and immunology which promotes productive interdisciplinary interaction.

Source:PIB

Release of Gharials

Why in News

Recently Government of Uttar Pradesh has released **Gharials (*Gavialis gangeticus*)** in the **Ghaghara river for** the conservation and protection in natural habitat.



Key Points

- **Natural Habitat:** Fresh waters of the northern part of India.
- Gharials, sometimes called gavials, are a type of Asian crocodylian distinguished by their long, thin snouts which **resembles a pot (*ghara* in Hindi)**.
- **Significance:** Population of Gharials are a **good indicator of clean river water**.
- **Gharials** are a type of Crocodylians that also includes crocodiles, alligators, caimans, etc. India has **three species of Crocodylians namely:**
 - **Gharial** (*Gavialis gangeticus*): **International Union for Conservation of Nature (IUCN)- Critically Endangered.**
 - **Mugger crocodile** (*Crocodylus palustris*): IUCN- Vulnerable
 - **Saltwater crocodile** (*Crocodylus porosus*): IUCN- Least Concern
- In comparison to Crocodiles, Gharials are very shy and unharmed species.

- **Primary Habitat: Chambal river**
 - The Chambal originates at the **Singar Chouri peak** in the northern slopes of the Vindhya mountains (Indore, Madhya Pradesh).
 - It joins the Yamuna River in **Etawah District of UP**.
 - **Tributaries:** Banas, Kali Sindh, Parbati.
 - The **National Chambal Sanctuary** is located along river Chambal on the tri-junction of Rajasthan, Madhya Pradesh and Uttar Pradesh. It is known for critically endangered gharials, the **red-crowned roof turtle**, and the **endangered Ganges river dolphin**.
- **Secondary Habitat:** Ghaghra and Gandak river, Girwa river (Katarniaghat Wildlife Sanctuary in Uttar Pradesh), the Ramganga river in Jim Corbett National Park and the Sone river.
- **Status:** Gharials are **critically endangered** in the **International Union for Conservation of Nature Red List of Species**.
 - Listed under **Schedule I** of the **Wild Life (Protection) Act, 1972**.
 - Listed on **Appendix I** of **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**.
- **Conservation Efforts:** Breeding Centres of **Kukrail Gharial Rehabilitation Centre** in Lucknow, Uttar Pradesh, **National Chambal Sanctuary** (Gharial Eco Park, Madhya Pradesh).
- **Threats:**
 - Gharials **prefer sandbanks** as suitable habitats. Wild animals as well as humans often destroy their eggs.
 - Increased **river pollution, dam construction, massive-scale fishing operations and floods**.
 - Illegal sand mining and poaching.

Ghaghara River

- It acts as an important aquatic corridor for gharials in Uttar Pradesh.
- Its source is near **Gurla Mandhata peak, south of Mansarovar** in Tibet.
- It is known as the **Karnaili** in Western Nepal.
- Its important tributaries are the **Sarda, the Sarju (Ayodhya is located on its bank) and the Rapti**.
- The Ghaghara joins the Ganga a few kilometres downstream of **Chhapra in Bihar**.
- After reaching the plain area, its stream gets divided into many branches of which, Koriyab and Garwa are important.
- The river bed is sandy and sudden bends start occurring in the stream.

Source:DTE

ELISA Antibody Kits

Why in News

Recently, the Indian Council of Medical Research (ICMR) has **approved the first batch of antibody testing** kits called **“Covid KAVACH ELISA”** manufactured by Zydus-Cadila to be used in **sero-survey**.

Key Points

- Covid KAVACH ELISA has been developed at the **National Institute of Virology, Pune**, by **isolating the virus from patients in India**.
 - **Enzyme-Linked Immunosorbent Assay (ELISA)** is a test that detects and measures antibodies in blood.
 - The test can be used to determine **antibodies related to certain infectious conditions**.
 - It can be used to diagnose **HIV, which causes AIDS, Zika virus** etc.
- The ELISA kits will be used in the **new nationwide “sero-survey” of the Ministry of Health**.
 - Sero-survey is **meant to detect the prevalence of antibodies** that appear after a patient has recovered.
 - The ICMR will lead the testing of 24,000 individuals in 69 districts at household level as part of this sero-survey.
- According to the ICMR, **real-time Reverse Transcription Polymerase Chain Reaction (RT-PCR) is still the frontline test for clinical diagnosis of Covid-19**, but the **antibody tests are critical for surveillance** to understand the proportion of population exposed to infection.
 - The antibody test for **Covid-19** acts as a **screening process** that gives quick results in a few hours.
 - The antibody test detects the body's response to the virus. It gives an indication that a person has been exposed to the virus.
 - If the test is positive, the swab is collected and an Ribonucleic Acid (RNA) test is done using the Polymerase Chain Reaction (PCR) kit.

- ELISA antibody tests are **different from the rapid antibody tests** previously used by Indian authorities.
 - ELISA kits are **more reliable and cheaper** than rapid antibody testing kits.
 - The ELISA kit has a **sensitivity** of 98.7% and a **specificity** of 100%.

Sensitivity signifies accurate positive test results, whereas specificity signifies accurate negative test results.
 - According to the **World Health Organisation (WHO)** the kits are suitable for **“for testing large numbers of samples per day, as well as in blood banks or for surveillance studies”**.
- ELISA has **minimal biosafety and biosecurity requirements** as compared to the real-time **RT-PCR** test.
- Moreover, **ELISA-based testing is easily possible even at the district level** as the test kit has **inactivated virus**.

Antibody

- **Antibody, also called immunoglobulin** is a **protective protein** produced by the immune system in response to the presence of a foreign substance, called an **antigen**.

A wide range of substances are regarded by the body as antigens, including disease-causing organisms and toxic materials.
- Antibodies **recognize and attack onto antigens** in order to remove them from the body.

PCR Test

- Kary Mullis, the American biochemist invented the **PCR technique**. He was awarded the Nobel Prize for Chemistry in 1993.
- Under this, **copies of a segment of DNA (deoxyribonucleic acid) are created** using an **enzyme called Polymerase**.

The **‘chain reaction’** signifies how the DNA fragments are copied, exponentially — one is copied into two, the two are copied into four, and so on.
- A **fluorescent DNA** binding dye called the **“probe”** is added to DNA, which shows the presence of the virus on a **fluorometer**.
- However, coronavirus is made of RNA (ribonucleic acid).
- Therefore to detect coronavirus, RNA is converted into DNA using a technique called **reverse transcription**.

A **‘reverse transcriptase’ enzyme** converts the RNA into DNA.
- Copies of the DNA are then made and amplified.
- Generally, the entire process of PCR test takes 24 hours to deliver the result.

Indian Council of Medical Research

- Indian Council of Medical Research (ICMR) is the **apex body in India for the formulation, coordination and promotion of biomedical research.**
- Its mandate is to **conduct, coordinate and implement medical research** for the benefit of the Society; translating medical innovations into products/processes and introducing them into the public health system.
- It is funded by the Government of India through the **Department of Health Research, Ministry of Health & Family Welfare.**

Source: IE

SAMARTH ERP

Why in News

The **Ministry of Human Resource Development (HRD)** has developed an **e-governance platform 'SAMARTH Enterprise Resource Planning (ERP)'** under the **National Mission of Education in Information and Communication Technology Scheme (NMEICT).**

Key Points

- SAMARTH ERP is an **open source, open standard enabled robust, secure, scalable, and evolutionary process automation engine** for Universities and Higher Educational Institutions.
 - **Enterprise Resource Planning (ERP)** refers to a type of software used to manage day-to-day business **activities such as accounting, procurement, project management, risk management and compliance, and supply chain operations.**
 - ERP in a University can improve management and administration.
- The platform has been implemented at the **National Institute of Technology (NIT), Kurukshetra**, a participating unit under the World Bank-supported **Technical Education Quality Improvement Program (TEQIP).**
- It would **automate the processes of the enhancement of productivity through better information management** in the institute by seamless access to information and proper utilization of information.
- It caters to faculty, students and staff at a University/Higher Educational Institutions.

National Mission on Education through Information and Communication Technology

- The Mission, **launched in 2009**, is a landmark initiative of the Ministry of Human Resource Development (MHRD), with the objective of seamlessly providing quality educational content to all the eligible and willing learners in India.
- It has been envisaged to leverage the potential of ICT, in the teaching and learning process for the benefit of all the learners in Higher Education Institutions.
- **Initiatives under the Program**
 - **SWAYAM:** The Study Webs of Active Learning for Young Aspiring Minds' (SWAYAM) is an integrated platform for offering online courses, covering school (9th to 12th) to Postgraduate Level. The online courses are being used not only by the students but also by the teachers and non-student learners, in the form of lifelong learning.
 - **SWAYAM Prabha:** It is an initiative to provide 32 High Quality Educational Channels through DTH (Direct to Home) across the length and breadth of the country on a 24X7 basis.
 - **National Digital Library of India (NDL):** It is a project to develop a framework of virtual repository of learning resources with a single-window search facility. Presently, there are more than 3 crore digital resources available through the NDL.
 - **Spoken Tutorial:** They are 10-minute long, audio-video tutorials, on open source software, to improve employment potential of students. It is created for self learning, audio dubbed into 22 languages and with the availability of an online version.
 - **Free and Open Source Software for Education (FOSSEE):** It is a project promoting the use of open source software in educational institutions. It does that through instructional material, such as spoken tutorials, documentation, such as textbook companions, awareness programmes, such as conferences, training workshops, and internships.
 - **Virtual Lab:** This is a project to develop a fully interactive simulation environment to perform experiments, collect data, and answer questions to assess the understanding of the knowledge acquired.
 - **E-Yantra:** It is a project for enabling effective education across engineering colleges in India on embedded systems and robotics.

Technical Education Quality Improvement Programme

- It was started in 2002 by the Ministry of Human Resources and Development with the assistance of the **World Bank** and is being implemented in a phased manner .
- It aims to upscale the quality of technical education and enhance capacities of institutions.

- **The Technical Education Quality Improvement Programme III (TEQIP-III)** was started in 2017 and will be completed by 2021.
 - It aims to develop technical education as a key component for improving the quality of Engineering Education.
 - The Objective is to improve quality and equity in engineering institutions in focus states such as in low income states.

Source:PIB

COBAS 6800 Testing Machine

Why in News

The Union Health Minister inaugurated the first automated **coronavirus testing device named 'COBAS 6800'**.

This is the first such testing machine that has been procured by the Government for testing of Covid-19 cases and is installed at the **National Centre for Disease Control (NCDC)**.

Key Points

- COBAS 6800 is a **fully automated**, high end machine for performing **Real Time Polymerase Chain Reaction (RT-PCR) testing for Covid-19**.
- It will provide **quality, high-volume testing** as it can test around 1200 samples in 24 hours.
 - This will largely increase the testing capacity in the country.
- It is a sophisticated machine **enabled with robotics that minimizes the chance of contamination** as well as the risk of infection to the health care workers.
- The machine requires a minimum **Biosafety Level 2** (BSL2+) containment level for testing, thus it was placed at the NCDC.
 - BSL2+ covers laboratories that work with agents associated with human diseases (i.e. pathogenic or infectious organisms) that pose a moderate health hazard.
- The device **can also detect other pathogens** like Viral Hepatitis B & C, **HIV (Human Immunodeficiency Virus)**, **Mycobacterium Tuberculosis**, Papilloma, Cytomegalovirus (CMV) infection, Chlamydia (a bacterial infection), Neisseria (bacteria) etc.

National Centre for Disease Control

- The National Centre for Disease Control (NCDC), formerly the **National Institute of Communicable Diseases (NICD)**, had its origin as the Central Malaria Bureau, established at Kasauli (Himachal Pradesh) in 1909.
- NICD was transformed into the National Centre for Disease Control (NCDC) with a larger mandate of controlling emerging and re-emerging diseases in **2009**.
- It functions as the **nodal agency** in the country for **disease surveillance, facilitating prevention and control of communicable diseases**.
- It is also a national level institute for **training specialized manpower** for public health, laboratory sciences and entomological services and is involved in various applied research activities.
- The Institute is under **administrative control of the Director General of Health Services**, Ministry of Health and Family Welfare.
- The Institute has its headquarters in **Delhi**.

Source: PIB

Y2K Bug

Why in News

Recently, the Prime Minister mentioned the **Y2K bug** while addressing the nation on **Covid-19** related issues.

Key Points

- **Description:**
 - The Y2K bug was a computer flaw or bug that people during the late 1900s thought would prove to be a massive problem when **dealing with dates beyond December 31, 1999**.
 - The letter K, which stands for kilo (a unit of 1000), is commonly used to represent the number 1,000. So, Y2K stands for Year 2000. It is also called the **'Year 2000 bug or Millennium Bug'**.
 - Y2K was **both a software and hardware problem**.

- **Background:**
 - While writing computer programs during the 1960s to 1980s, computer engineers **used only the last two digits of a year.**
 - For example, "19" was left out from "1999" and only "99" was used. This was done because **storing data in computers was a costly process** that also took up a lot of space.
 - As the new century approached, programmers began to worry that computers might not interpret "00" as 2000, but instead as 1900.
 - This led to the idea that all activities that were programmed would be damaged as a computer **would interpret January 1, 1900 instead of January 1, 2000.**
 - **Implications:**

The sectors such as Information Technology (IT), banking, transportation, power plants, medical equipment, etc. which used to work on correct date and time synchronisation were threatened by the Y2K problem.
 - **Solution:**
 - Software and hardware companies raced to fix the bug and provided "Y2K compliant" programs to help.
 - The simplest provided solution was that the **date was expanded to a four-digit number.**
 - **Impact:**

Countries such as Italy, Russia, and South Korea had done little to prepare for Y2K. They had no more technological problems than those countries, like the U.S., that spent millions of dollars to combat the problem. Due to the lack of results, many people **dismissed the Y2K bug as a hoax.**
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Diamer-Bhasha Dam

Why in News

Recently, **Pakistan** signed a contract with a joint venture of a **China Power** (Chinese state-run firm) and the **Frontier Works Organisation** (FWO-a commercial arm of Pakistan's military) for the construction of the **Diamer-Bhasha dam.**

The contract covers construction of a diversion system, main dam, access bridge and the 21MW Tangir hydropower project.



Key Points

- The Diemer-Bhasha Dam is located on the **Indus River** in **northern Pakistan** between **Kohistan district in Khyber Pakhtunkhwa** and **Diemer district in Gilgit Baltistan**.
- The dam will have a **gross storage capacity of 8.1 Million Acre Feet (MAF)** and **power generation capacity of 4500 MW**.
- With the **height of 272 meters**, it will be the **tallest Roller Compact Concrete (RCC)** dam in the world.
- The dam project with a total financial outlay of about 1,406.5 billion Pakistani rupees would be **completed in 2028**.

- **Purpose:**
 - Fulfil the increasing water and electricity requirements of the country.
 - Serve as the main storage dam of the country, besides Mangla and Tarbela dams.
 - Help alleviate acute irrigation shortage in the Indus basin irrigation system.
 - Reduce intensity, quantum and duration of floods and reduce magnitude and frequency of floods in the River Indus downstream.
 - Accelerate development and create job opportunities, besides improving availability of water and clean energy.
- The project was approved in 2010, but it suffered delays because international lending agencies backtracked due to the **opposition from India** as a major part of the dam is located in Gilgit-Baltistan (one of the **disputed territories** of India) and it will cause unrest in the region.
- **India's Stand:**
 - India has **opposed the move** on the grounds that **Gilgit-Baltistan region is part of the erstwhile state of Jammu and Kashmir** that was **illegally occupied by Pakistan**.
 - India has **consistently conveyed her protest and shared concerns with both China and Pakistan** on all such projects in the Indian territories under Pakistan's illegal occupation.
 - In the past too, India has opposed projects jointly taken up by Pakistan and China in Pakistan-occupied Kashmir (POK) as part of the **China-Pakistan Economic Corridor**.

Source: TH

National Institutes of Pharmaceutical Education and Research

Why in News

A large number of multi-faceted research proposals have been submitted by various **National Institutes of Pharmaceutical Education and Research (NIPERs)**, towards the containment, identification and treatment of **Covid-19** to relevant agencies for approval.

Also, these institutes are working on several projects. For example, NIPER Guwahati has come up with a **"hands-free object"** for touch-less opening of doors, drawers & elevators.

Key Points

- National Institutes of Pharmaceutical Education and Research (NIPERs) are the **institutes of national importance** under the aegis of the Department of Pharmaceutical, **Ministry of Chemicals and Fertilizers**.
- The seven institutes are functional at Ahmedabad (Gujarat), Hyderabad (Telangana), Hajipur (Bihar), Kolkata (West Bengal), Guwahati (Assam), Mohali (Punjab), and Raebareli (Uttar Pradesh).
- The Institute is conceived to provide **leadership in pharmaceutical sciences** and related areas not only within the country, but also to the countries in **SouthEast Asia, South Asia and Africa**.
- NIPER, Mohali is a member of Association of Indian Universities and Association of Commonwealth Universities.
 - **Association of Indian Universities (AIU)**, formed in 1925 as Inter-University Board (IUB), is an association of all universities in India. It is actively engaged in the growth and development of higher education.
 - The **Association of Commonwealth Universities** is an international organisation dedicated to building a better world through higher education in over 50 countries across the **Commonwealth**.
- **Thrust Areas of Research:**
 - **Tuberculosis**
 - **Malaria**
 - **Diabetes**
 - Leishmaniasis (disease caused by the protozoan Leishmania parasites)
 - Immunomodulation (therapeutic interventions aimed at modifying the immune response)

Source: PIB
