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News Analysis (16 May, 2020)

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Economic Stimulus-III

Why in News

Recently, the Union Finance Minister announced the measures to strengthen Infrastructure Logistics, Capacity Building, Governance and Administrative Reforms for Agriculture, Fisheries and Food Processing Sectors as part of the **third 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** and the **Economic Stimulus-II** were announced.

Key Points

- **Agri Infrastructure Fund**
 - Financing facilities of **₹1,00,000 crore** for funding **Agriculture Infrastructure Projects** at farm-gate and aggregation points (**Primary Agricultural Cooperative Societies, Farmers Producer Organizations** (FPOs), Agriculture entrepreneurs, Start-ups, etc.).
 - Funds will be created **immediately**.

- **Formalisation of Micro Food Enterprises**
 - A **₹10,000 crore** scheme promoting '**Vocal for Local with Global outreach**' will be launched to help 2 lakh **Micro Food Enterprises** (MFEs) who need technical upgradation to attain **Food Safety and Standards Authority of India** (FSSAI) food standards, build brands and marketing.
 - Existing micro food enterprises, FPOs, **Self Help Groups** (SHGs) and Cooperatives will be supported.
 - The **focus** will be on **women** and **SC/ST owned units** and those in **Aspirational districts** and a **Cluster based approach** (e.g. Mango in Uttar Pradesh, Tomato in Karnataka, Chilli in Andhra Pradesh, Orange in Maharashtra etc.) will be followed.
- **Pradhan Mantri Matsya Sampada Yojana**
 - The scheme will be launched for **integrated, sustainable, inclusive development of marine and inland fisheries**.
 - **₹11,000 crore** for **activities** in Marine, Inland fisheries and Aquaculture and **₹9000 crore** for **Infrastructure** (fishing harbours, cold chain, markets etc) shall be provided.
 - The **focus** will be on Islands, Himalayan States, North-east and Aspirational Districts.
- **National Animal Disease Control Programme**
National Animal Disease Control Programme for **Foot and Mouth Disease (FMD) and Brucellosis** launched with a total outlay of **₹13,343 crore** to ensure **100% vaccination** of cattle, buffalo, sheep, goat and pig population.
- **Animal Husbandry Infrastructure Development Fund**
 - Under it, a fund of **₹15,000 crore** will be set up, with an **aim** to **support private investment** in Dairy Processing, value addition and cattle feed infrastructure.
Animal rearing or husbandry is considered an associate business with agricultural activities in rural India and is an integral component of Indian agriculture, supporting the livelihood of the rural population.
 - Incentives will be given for establishing plants for export of **niche products**.
 - A **niche product** is a product **targeting a specific section** of a larger industry and market. Niche products are **often** (but not always) **more expensive** than more generic products.
 - **Example:** Organic foods, Speciality foodstuff like high-quality coffee, Customisable products, etc.

- **Promotion of Herbal Cultivation**
 - 10,00,000 hectare will be covered under Herbal cultivation in next two years with an **outlay of ₹4,000 crore** which will lead to **₹5,000 crore income generation** for farmers.
 - The **National Medicinal Plants Board** (NMPB) has supported 2.25 lakh hectare area under **cultivation of medicinal plants** and will bring 800-hectare area by developing a **corridor of medicinal plants** along the banks of **Ganga**.
 - NMPB was set up by the Government of India on **24th November, 2000 to promote medicinal plants sector**.
 - Currently, the board is located under the **Ministry of AYUSH**.
- **Beekeeping Initiatives**

With an outlay of **₹500 crore**, Government will implement a scheme for: Infrastructure development related to **Integrated Beekeeping Development Centres**, capacity building, collection, marketing and storage centres, post harvest & value addition facilities.
- **Extension of Operation Greens**
 - **Operation Greens** run by the **Ministry of Food Processing Industries** will be **extended from Tomatoes, Onion and Potatoes (TOP) to all fruit and vegetables**, with an outlay of **₹500 crore**.
 - It will provide **50% subsidy on transportation** from surplus to deficit markets, **50% subsidy on storage**, including cold storages and will be **launched as pilot for the next 6 months** and will be extended and expanded.
 - This will lead to **better price realisation** to farmers, **reduced wastages** and **affordability of products** for consumers.
- **Amendments to Essential Commodities Act, 1955**
 - Under the amendments to the **Essential Commodities Act** (ESA), **agriculture food stuffs** including cereals, edible oils, oilseeds, pulses, onions and potatoes shall be **deregulated**.
 - **Stock limits will be imposed** under **very exceptional circumstances** like national calamities, famine with surge in prices.
 - Further, **no such stock limit** shall apply to **processors or value chain participants**, subject to their installed capacity or to any exporter subject to the export demand.
- **Agriculture Marketing Reforms**

A **Central law** will be formulated to **provide**:

 - Adequate choices to the farmer to sell their produce at remunerative price.
 - Barrier free Inter-State Trade.
 - Framework for e-trading of agriculture produce.

Advantages from the Reforms

- The two recent reforms of **amendment in the ECA** and the **proposed formulation of a Central law that will not bind farmers** to sell their crop only to licensed traders in the **Agricultural Produce Market Committee** (APMC) mandis of their respective talukas or districts will **empower farmers**.
 - ECA will **define** clear triggers in terms of **“price surges”** for imposition of stocking limits.
 - These provisions will be **incorporated in the Act itself to remove** any scope for administrative **ambiguity**.
 - This will help in **inflation**-targeting within the ceiling of 6% as prescribed by the **Reserve Bank of India**.
- While **agriculture** is a **state subject** and state governments have accordingly enacted their own APMC Acts, the new Central law apparently relies on **Article 301 (Freedom of trade, commerce and intercourse)** of the Constitution along with entries in the **Seventh Schedule** (defines and specifies allocation of powers and functions between Union and States).

These give **powers to the Centre to regulate all interstate and intrastate trade and commerce in foodstuffs**, which can be used to create an **integrated national market** by removing restrictions placed by APMC laws.

Source: PIB

West Bengal Major Irrigation and Flood Management Project

Why in News

Recently, the Government of India, the Government of West Bengal, the **Asian Infrastructure Investment Bank (AIIB)** and the **World Bank** have signed a loan agreement for a project titled **‘West Bengal Major Irrigation and Flood Management Project’**.

The project **includes the improvement in irrigation and flood management in the Damodar Valley Command Area (DVCA)**.

Key Points

- West Bengal Major Irrigation and Flood Management Project aims to improve irrigation service delivery, strengthen flood risk management and improve climate change resilience in the project area.
- It is intended to **benefit about 2.7 million farmers** from five districts of West Bengal.

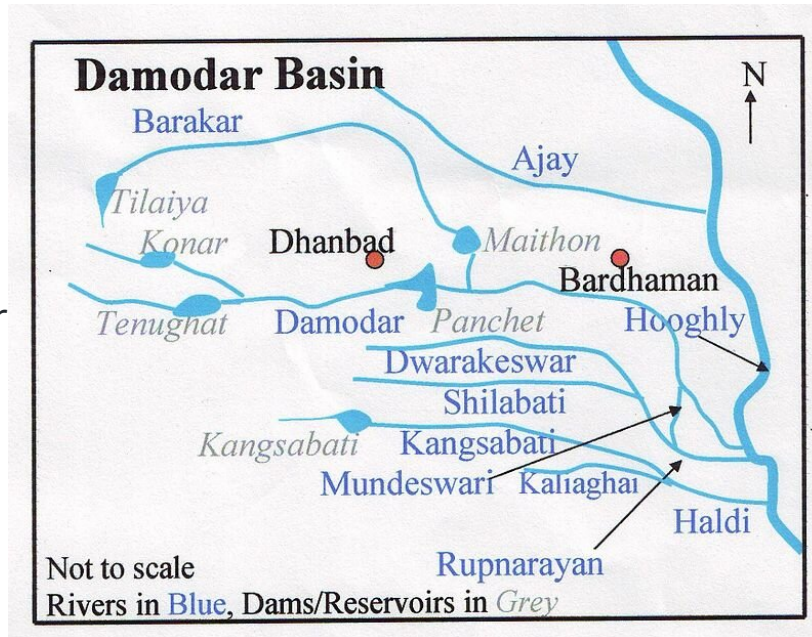
- The project comprises four components:
 - **Irrigation Management** : It will improve the management of the Damodar Valley Command Area (DVCA) irrigation scheme to improve service delivery, performance monitoring and irrigation efficiency evaluation.
 - **Modernization of Irrigation Infrastructure** : It will invest in the modernization of irrigation infrastructure at main, branch, distributary and minor canal levels.
 - **Flood Management** : It will invest in structural measures to reduce flooding in the project area. It will also include the implementation of the recommendations of the Dam Safety.
 - **Project Management** : It will strengthen the implementation agency's capacity for project management, including financial management, monitoring and evaluation, and environmental and social safeguards management and communication. It will also support a communication campaign to inform stakeholders on the importance of water use efficiency.
- The **total value** of the project is **\$413.8 million**, co-financed between the International Bank for Reconstruction and Development (IBRD) (\$145 million), the Asian Infrastructure Investment Bank (\$145 million) and the Government of West Bengal (\$123.8 million).

International Bank for Reconstruction and Development (IBRD) is a part of the World Bank Group that provides financial products and policy advice to help countries reduce poverty and extend the benefits of sustainable growth to all of their people.

Background

- The Damodar Valley Command Area is in the **need of modernization**.
 - The **command area** is the area around the dam/ project, where the area gets benefits from the dam, such as irrigation water, electricity, etc. It is an area which can be irrigated from a project and is fit for cultivation.
 - In other words, it is the area around a dam which is under its command as an irrigation source.
- It faces **key challenges** including degradation of infrastructure, inadequate irrigation management, poor quality of service delivery and inefficient irrigation.
- Due to above reasons, the **farmers in the area are forced to extract groundwater**, which increases the costs of cultivation.
- Moreover, the Lower Damodar basin area is historically flood-prone. As this area lacks the infrastructure to protect against recurrent flooding, on average, **33,500 hectares of the cropped area and 461,000 people are affected annually due to recurrent flooding** in the area.

Damodar River



- The Damodar river rises in the **Palamu hills of the Chota Nagpur plateau** in the state of Jharkhand.
- It passes through two Indian states namely, **Jharkhand and West Bengal**.
 - The Damodar occupies the eastern margins of the Chotanagpur Plateau where it flows **through a rift valley** and finally joins the Hugli.
 - The **Barakar river** is its **main tributary**.
- Due to the devastating floods caused by the Damodar river and its tributaries in the plains of West Bengal, it is also known as the '**sorrow of Bengal**'.

Damodar Valley Corporation

- The Damodar Valley Corporation was established in **1948** as the **first multipurpose river valley project of independent India**.
- Under this project, **four dams** were constructed namely,
 - **Tilaiya Dam:** It has been constructed across the **Barakar river** at Tilaiya in Koderma district **of Jharkhand**.
 - **Konar Dam:** The Konar dam has been constructed across the Konar river—a tributary of the Damodar River in the Hazaribagh District of **Jharkhand**.
 - **Maithon Dam :**It has been constructed across the Barakar river near the confluence of Barakar with Damodar river.
 - **Panchet Dam:** The Panchet dam has been constructed across the Damodar river, about 20 km south of the Maithon Dam.

Source:PIB

World Bank's Support to India

Why in News

Recently, the **World Bank** has approved **USD 1 billion** for **accelerating India's Covid-19 Social Protection Response Programme**.

- With this announcement, **commitment from the World Bank** towards emergency Covid-19 response in India has reached to **USD 2 billion**.
- Earlier, a **USD 1 billion support** was announced in April to support **India's health sector**.

Key Points

- **Social Protection Response Programme:**
 - It is pivoted towards **migrants, unorganised workers, informal sector**, and creating **an integration of the existing infrastructure of safety nets like the Public distribution system, Jan Dhan, Aadhar & mobile**.
 - It will expand the coverage of India's social protection system by helping **vulnerable groups access** to more **social benefits directly and across the country**.
 - **Geographic portability** would be introduced to ensure that social protection benefits could be accessed from anywhere in the country, providing relief to inter-State migrant workers.
 - It will support the Government of India's efforts towards a **more consolidated delivery platform** accessible to both rural and urban populations across state boundaries.
 - Such a system will also **strengthen India's federalism** by enabling and supporting states to respond quickly and effectively.
- **Phased Implementation:** This new support will be funded and operated in two phases:
 - An immediate allocation of **\$750 million** for fiscal year 2020 .
 - A **\$250 million** second tranche that will be made available for fiscal year 2021.
- **First Phase:** It will be implemented countrywide through the **Pradhan Mantri Garib Kalyan Yojana (PMGKY)** to benefit vulnerable groups, particularly migrants and informal workers.
- **Second phase:** It would deepen the social protection package, whereby additional cash and in-kind benefits based on local needs will be extended through state governments and portable social protection delivery systems.

Need

- Unprecedented **introduction of social distancing and lock downs** due to Covid-19, to slow down the spread of the virus, have impacted economies and jobs especially in the informal sector.
- **Over 90% of India's workforce** is employed in the **informal sector**, without access to significant savings or workplace based social protection benefits such as **paid sick leave or social insurance**.
- **Over 9 million migrants**, who cross state borders to work each year, are also at greater risk as social assistance programmes in India largely provide benefits to residents .
- In an urbanising India, **cities and towns** need **targeted support** as its social protection programmes are focused on rural populations.
- **Social protection is critical** when **half of India's population earns less than \$3 a day** and are close to the poverty line.

Source:PIB

Defence Testing Infrastructure Scheme

Why in News

Recently, the government has approved the launch of '**Defence Testing Infrastructure Scheme (DTIS)**' in order to give a **boost to domestic defence and aerospace manufacturing**.

Background

- The Government has accorded high priority to development of the manufacturing base of Defence and Aerospace sectors in the country under **"Make in India" initiative** to reduce dependence on imports.
- In the above context, the government has already announced establishment of **Defence Industrial Corridors (DICs) in Uttar Pradesh and Tamil Nadu**.
- But, still one of the main impediments for domestic defence production is **lack of easily accessible state-of-the-art testing infrastructure**.
- Defence Testing Infrastructure is **capital intensive** requiring continuous upgradation and it is not economically viable for individual defence industrial units to set up in-house testing facilities.

Key Points

- **Objectives:**
 - The Scheme aims to promote indigenous defence production, with special focus on participation of **MSMEs** and Start Ups by **bridging gaps in defence testing infrastructure in the country.**
 - It will also help to provide easy access and to meet the testing needs of the domestic defence industry.
 - It will facilitate indigenous defence production, consequently reduce imports of military equipment and help make the country self-reliant.
- **Finance and Cooperation:**
 - The Scheme has an outlay of **Rs 400 crore** for creating state of the art testing infrastructure over the **duration of five years.**
 - It envisages to set up test facilities in **partnership with private industry.**
 - The projects under the Scheme will be provided with up to **75% government funding in the form of 'Grant-in-Aid'.**
 - The remaining **25% of the project cost** will have to be borne by the **Special Purpose Vehicle (SPV)** whose constituents will be **Indian private entities and State Governments.**
 - Only private entities registered in India and State Government agencies will qualify for forming the implementation agency for the Scheme.
 - The SPVs under the Scheme will be registered under Companies Act 2013.
- **Location of DTISs:**

The Scheme aims at setting up Greenfield Defence Testing Infrastructure mainly in DICs but is not limited to setting up Test Facilities in the DICs only.

Source:PIB

Endemic Disease

Why in News

Recently, the **World Health Organisation (WHO)** predicted that novel coronavirus could become **endemic to the world.**

- The rapid spread of **Covid-19** across the world has been characterised as **Pandemic** by the WHO.
- Though India has made great efforts in containing the spread of the virus, the probability of its conversion into the category of endemic would be a great vulnerability.

Key Points

- **Endemic Disease:**
 - A disease is called **endemic** when the presence or **usual prevalence of its infectious agent is constant** within a **given geographical area or population group**.
 - When the **cases begin to rise**, it is classified as an **epidemic**. If this epidemic has been **recorded in several countries and areas**, it is called a **pandemic**.
 - Some **examples** of endemics include chicken pox and **malaria**, where there are a predictable number of cases every year in certain parts of the world.
 - According to the WHO, the **novel coronavirus may become just another endemic virus in communities**, and may never go away.
- **R0 and Spread of the Disease:**
 - The mathematical figure **'R0'(pronounced "R-naught")** indicates **how fast an infection is spreading**.
 - It is called the **basic reproduction number** and indicates the average number of people who will contract the virus from a person who has already been infected, in a population that does not have immunity for the said disease.
 - If **R0=1**, then the disease is endemic.
 - When **R0>1**, it implies that the cases are increasing and that the disease will eventually become an epidemic.
- **When a Disease Becomes Epidemic**
 - The Disease becomes **"increasingly tolerated"** and the responsibility of protecting against it shifts from the government to the individual.
 - This means, rather than government agencies actively engaging in tracking and identifying cases, the individuals themselves will be responsible for managing risk from the disease and seeking care.
 - The sociopolitical response to the disease may also change, with investment in the disease becoming institutionalised along with the **disease-inducing behavioural changes in people**.
 - **Epidemic diseases typically have higher mortality and morbidity than the diseases which have become endemic**, owing to lack of clinical experience and knowledge. Over time, effective prevention and treatment interventions emerge for the disease that has become endemic.

Types of Endemic Diseases

- **Holoendemic Diseases:** This kind of endemic disease affects mostly children. This infection is highly prevalent in the early years of life. The adult population do not show traces of diseases as much as children do. **Malaria** is a type of holoendemic disease.
- **Hyperendemic Diseases:** These types of endemic diseases are constantly present at a high rate and are found among all age groups equally. **E.g. African Sleeping Sickness and Chicken Pox.**

Release of 11th Panchen Lama

Why in News

Recently, the United States has urged China to release Tibetan Buddhism's 11th Panchen Lama, who was taken into captivity at the age of six by Chinese authorities.

Key Points

- In 1995, a young Tibetan boy **Gedhun Choekyi Nyima** was recognised as the 11th Panchen Lama, **the second highest spiritual authority in Tibetan Buddhism** after the Dalai Lama.
- Days after his recognition Nyima was detained by Chinese authorities, and became the **world's youngest political prisoner**.
- Thereafter, China appointed its own Panchen Lama, **Gyaltzen Norbu**, who has been described by exiles as a "**stooge of the atheist Chinese Communist Party government**".
 - The incident threatened the **unique identity of Tibetan Buddhism** and created **religious freedom issues** in Tibet.
- The Dalai Lama has in the past strongly criticised China for meddling in the system of reincarnation of the Dalai Lamas and Panchen Lamas.

Background

- Tibet is governed as an **autonomous region of China**. Beijing claims a centuries-old sovereignty over the region, but many Tibetans argue that Tibet was colonised.
- China sent in thousands of troops to enforce its claim on the region in 1950.
 - Some areas became the **Tibetan Autonomous Region** and others were incorporated into neighbouring Chinese provinces.
- In 1959, after a failed anti-Chinese uprising, the 14th **Dalai Lama fled Tibet and set up a government in exile in India**.
- **China views the Dalai Lama as a separatist threat**, although he has repeatedly stated that his goal is for Tibetan autonomy rather than independence.

Tibetan Buddhism

- **Origin:**
 - Buddhism became a major religion of Tibet towards the end of the 8th century CE.
 - The **Tibetan king, Trisong Detsen**, who invited **two Buddhist masters namely, Shantarakshita and Padmasambhava from India to Tibet**. These two masters had helped to translate important Buddhist texts into Tibetan.
 - **Shantarakshita** was the **abbot** of Nalanda in India. He **built the first monastery in Tibet**.
 - **Padmasambhava** was a **mahasiddha** (master of miraculous powers).
- **Geographical Reach:**
 - Tibetan Buddhism is not only found in Tibet, but also across the **Himalayan region from Ladakh to Sikkim, as well as parts of Nepal**.
 - It is the **state religion of the kingdom of Bhutan**.
 - It also spread to **Mongolia and parts of Russia** (Kalmykia, Buryatia and Tuva).
 - **Tara** (Tibetan Sgrol-ma) is a **Buddhist saviour-goddess**, widely popular in **Nepal, Tibet, and Mongolia**.
- **Special Features of Tibetan Buddhism:**
 - Tibetan Buddhism **combines the essential teachings of Mahayana Buddhism with Tantric and Shamanic**, and material from an **ancient Tibetan religion called Bon**.
 - **Relationship between life and death:** A proper understanding of the subject of death and dying is held to be indispensable towards having a fuller, happier life.
 - **Lama:** Lama is a teacher.
 - **Deities:** These deities are not gods, but aspects of enlightened qualities eg; wisdom and compassion. The patron deity of Tibet is **Avalokiteshvara**, the Buddha of Compassion.
 - **Rituals:** Temple ceremonies are often noisy, with brass instruments, cymbals and gongs, and musical and impressive chanting by formally dressed monks.

Source: IE

Food Systems

Why in News

According to the **Global Nutrition Report 2020**, food systems should be inclusive, local and diverse to address food security and malnutrition and build economic and climate resilience.

Key Points

- **Food systems**
 - A food system is a composite of the environment, people, inputs, processes, infrastructures, institutions, etc.
 - Production, processing, distribution, preparation and consumption of food are a part of food systems.
 - They also include the outputs of such activities, including socio-economic and environmental outcomes.
- **Reducing malnutrition through food systems**
 - **By adjusting food systems** away from staples like wheat and rice towards non-staples like vegetables, fruits, fish, nuts etc., malnutrition can be reduced.
 - More incentives towards millets, and non-staples will make production of healthy food attractive to producers and therefore improve the availability of **more nutritious food**, especially for the rural poor.
 - Procurement of **nutritious and climate-resilient crops like sorghum and millets** should become the policy of the government.
 - Their consumption should be increased through public food distribution schemes and creating awareness on the health benefits of these crops.
 - **Child malnutrition is a risk factor** that can keep India from fulfilling all its child mortality related Sustainable Development Goals (e.g. SDG 2: Zero Hunger).
- **Role of small farm holders**
 - Small farm holders who usually do not have access to big value chains will be critical in improving food systems.
 - Incentivising and hand-holding them to transition to diverse crops may improve local value chains as better access enables income enhancement.
- **Food systems and climate change**
 - **Smaller and localised value chains instead of supermarket** driven long-value chains can reduce carbon footprints.
 - Similarly, climate-resilient and less water intensive crops should be incentivised and popularised among farmers and consumers alike.

Source: DTE

Fibroin-based Hydrogel for Insulin

Why in News

Recently, Scientists at Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), have developed an **injectable silk fibroin-based hydrogel (or iSFH)** for sustained **insulin delivery** in **diabetic** patients.

JNCASR is an autonomous research institute under the **Department of Science and Technology**.

Key Points

- **Diabetes:**
 - It results from **inadequate production of insulin** due to loss of **beta cells** (found in pancreas, make insulin) **or insulin resistance** within the body.
Insulin helps glucose from food get into cells to be used for energy.
 - The inadequate production of insulin does not convert glucose into energy which leads to an abrupt **increase of blood glucose level**.
 - **India** is home to more than 70 million diabetes people, it is the second-highest in the world after China.
- **Treatment:**

The conventional and last resort of treatment involves **repeated subcutaneous insulin injections** to maintain the physiological glucose balance.

Subcutaneous means under the skin.
- **Issues in Treatment:**

The **multiple subcutaneous insulin** injections are associated with pain, local tissue necrosis (death of tissues), infection, nerve damage, and locally concentrated insulin amyloidosis responsible for inability to achieve physiological glucose balance.

Amyloidosis is a phenomenon that occurs when an abnormal protein, called amyloid, builds up in organs and interferes with their normal function.
- **One of the Solutions:** Controlled and sustained insulin delivery.
- **iSFH:** The **injectable Silk Fibroin Hydrogel (iSFH)** can **ease insulin delivery in diabetic patients**.
 - The iSFH has successfully delivered active insulin in rats.
 - The subcutaneous injection of insulin with-iSFH in diabetic rats formed an **active depot** under the skin from which **insulin trickled out slowly** and restored the physiological glucose balance for a prolonged period of 4 days.
 - The **porous form of iSFH** allowed the **encapsulation** of **recombinant** insulin (identical to human insulin) in its active form in diabetic rats.
 - It has proved to be an effective insulin delivery tool with excellent **mechanical strength, biocompatibility, encapsulation, storage**, and demonstration of its **sustained delivery of active insulin** in the diabetic animal.
 - The **active encapsulation and delivery of insulin by iSFH** may also have implications for the future development of formulations for **oral insulin delivery**.

- Silk fibroins are the unique **proteins of silkworm fibers**.
- Researchers have found fibroin as the **promising resources of biotechnology and biomedical materials**.
- They have unique properties which include **biocompatibility (i.e. compatible with living tissue), favorable oxygen permeability, and biodegradability**.
- The **degradation product also can be readily absorbed by the body** with minimal inflammatory reaction.

Hydrogel

A hydrogel is a three-dimensional network of **hydrophilic polymers** that can swell in water and hold a large amount of water while maintaining the structure due to chemical or physical cross-linking of individual polymer chains.

Source: PIB

Lightweight Carbon Foam

Why in News

Recently, scientists (including a recipient of the INSPIRE Faculty award) from the CSIR-Advanced Materials and Processes Research Institute (Bhopal) have developed **the 'lightweight carbon foam'** which has the potential to **replace lead grid in lead-acid batteries**.

Background

- Currently, the large-scale energy-storage sector is dominated by **Lithium-ion (Li-ion) batteries**, because of their **higher energy density and long cycle life**.
Energy density is the amount of energy that can be stored in a given mass of a substance or system, i.e. a measure of storage of energy.
- However, there are some **concerns** regarding Li-ion batteries, such as safety risk, limited resource supply, high cost, and lack of recycling infrastructure.
- As a result, **lead-acid batteries are still one of the most reliable, economical, and environmentally friendly options**.
 - The Lead-acid battery is one of the **oldest types of rechargeable batteries** and was invented in **1859 by the French physicist Gaston Plante**.
 - However, electrodes in the lead-acid batteries **suffer** from the problem of **heavyweight, corrosion, poor thermal stability, and diffusion of electrolytes in one dimension, which ultimately affects the output power**.

- The above issues necessitated the development of **an alternative battery system** with lower environmental concerns, economic and **higher energy density**.
- Thus, currently developed lightweight carbon foam **can replace the lead-acid batteries** as the foam is **highly resistive to corrosion**, has **good electrical and thermal conductivity** with **high surface area**.

Key Points

- **Properties:**

- The developed lightweight carbon foam has **very less density and high porosity**.
- It also has a **good mechanical strength** and is **insoluble in water**.

- **Uses:**

It can also be useful for heat sinks in power electronics, electromagnetic interference shielding in aerospace, hydrogen storage, electrodes for lead-acid batteries and water purification systems.

In the case of water purification systems it is cost-effective for the **removal of arsenic, oil, and other metals from contaminated water**.

- **Benefits:**

- These carbon foams are non-toxic, easy to fabricate and affordable.
- The raw material for the fabrication of carbon foam is easily available and there is no requirement of any costly equipment for the fabrication of carbon foam and filtration.
- Such materials can be safely used in remote areas where power supply is scarce.

- **Other Related Development:**

Recently, a group of researchers (including a recipient of the INSPIRE Faculty Award) have also made significant achievements in developing **nanomaterials based supercapacitors** to achieve **high energy density** and **power density of supercapacitors**.

Source:PIB

GOAL Programme

Why in News

Recently, the Union Minister for Tribal Affairs launched **“GOAL (Going Online As Leaders)”** programme at a webinar in New Delhi.

GOAL is a **joint initiative of Facebook and the Ministry of Tribal Affairs**.

Key Points

- The GOAL programme is designed to provide **mentorship to tribal youth through digital mode.**
- The program will focus on **three core areas** - Digital Literacy, Life Skills and Leadership and Entrepreneurship.
- The program intends to upskill and **empower 5,000 tribal youths in the current phase** to harness the full potential of digital platforms and tools to learn new ways of doing business, explore and connect with domestic and international markets.
- The programme has been designed with a **long term vision** to develop the potential of tribal youth and women to help them acquire skills and knowledge through mentorship in various sectors including horticulture, food processing, bee keeping, tribal art and culture, medicinal herbs, entrepreneurship among others.
- The program aims to enable **Scheduled Tribe (ST) youth** in remote areas to use digital platforms for sharing their aspirations, dreams and talent with their mentors.
- All the mentees **will be provided with smartphones and Internet access (for one year) by Facebook** along with exposure to various external forums that will give opportunity to the participants to showcase their entrepreneurial skills and leadership abilities.
- The program will **also create awareness amongst tribal beneficiaries about various schemes** initiated by Central and State Governments for welfare of STs as well as their fundamental duties.

Source:PIB

ICGS Sachet

Why in News

Recently, the Defence Minister of India has commissioned **Indian Coast Guard Ship (ICGS) Sachet** and **two Interceptor Boats (IBs) C-450** and **C-451** in Goa via video conference.

Key Points

- **ICGS Sachet**
 - 'Sachet' means **alert**.
 - It is the first in the series of five **Offshore Patrol Vessels (OPVs)** and has been designed and built **indigenously** by **Goa Shipyard Limited (GSL)** and is fitted with **state-of-the-art navigation** and **communication equipment**.
 - The 105 metre long ship is designed to carry a twin-engine helicopter, four high speed boats, one inflatable boat for swift boarding and search and rescue operations.
 - The ship is also **capable of carrying limited pollution response equipment** to undertake oil spill pollution response at sea.
 - It is for the **first time in Indian maritime history** that a **ship was commissioned through digital medium**, maintaining strict protocol of social distancing in the backdrop of **Covid-19 pandemic**.
- **IBs C-450 and C-451**
 - These are **indigenously** designed and built by **Larsen & Toubro Shipyard, Hazira** and fitted with the **latest navigation and communication equipment**.
 - The two 30 metre long boats are **designed for** high speed interception, close coast patrol and low intensity maritime operations.
 - The **quick response capability** of the IBs makes it an ideal platform to respond and thwart any emerging maritime situation.
- The ICG, which is the **fourth largest Coast Guard in the world**, has established itself as a reliable force in **coastal security**.
- The ICG along with Indian Shipyards plays a major role in realising India's **SAGAR Vision (Security and Growth for All in the Region)** and **Make in India** or **Self-reliant India Mission (Atmanirbhar Bharat Abhiyan)**.

Indian Coast Guard

- It was established on **18th August 1978** by the **Coast Guard Act, 1978** of the Parliament of India as an independent Armed force of India.
- It operates under the **Ministry of Defence**.
- **Headquarter:** New Delhi.
- It has jurisdiction over the territorial waters of India including **contiguous zone and exclusive economic zone (EEZ)**.
- It is **responsible** for marine environment protection in maritime zones of India and is coordinating authority for response to oil spills in Indian waters.

Source: PIB

International Day of Families

Why in News

The International Day of Families is observed on **15 May** every year.

Key Points



INTERNATIONAL
DAY OF FAMILIES
15 MAY 2020

- In 1993, the **United Nations** General Assembly passed a resolution that 15 May of every year should be observed as the International Day of Families.
- **Objectives:** It provides an opportunity to promote awareness of issues relating to families and to increase the knowledge of the social, economic and demographic processes affecting families.
- **Theme:** The theme for 2020 is **Families in Development: Copenhagen & Beijing+25**.
The theme changes every year depending on the developmental endeavours ahead of the organisations working towards the welfare of families.
- **Steps to promote healthy families:**
 - **Healthy familial bonds** are some of the greatest boons that parents and elders in the family can pass on their children and family youngsters.
 - **A nurturing environment** promoted with love and care helps the children grow up into well-balanced, happy adults.
 - **Communication, quality time, appreciation, respect** are some of the essentials towards building a strong and supportive family.

Copenhagen & Beijing+25

- Copenhagen & Beijing+25 signifies the **World Conferences on Women (WCW)** organised by the United Nations.
 - The United Nations has organized four world conferences on women.
 - These took place in **Mexico City in 1975, Copenhagen in 1980, Nairobi in 1985 and Beijing in 1995**.

- **WCW, Copenhagen:**

Under this a **Programme of Action** called for stronger national measures to ensure women's ownership and control of property, as well as improvements in protecting women's rights to inheritance, child custody and nationality.

- **WCW, Beijing:**

- It marked a significant turning point for the global agenda for gender equality. The Beijing Declaration was adopted unanimously by the UN at the end of the 4th WCW.
- 2020 marks the **25th** anniversary of the **4th World Conference on Women (WCW)** and adoption of the Beijing Declaration and Platform for Action (1995). Hence, it is referred to as Beijing + 25.

Source
