

## 1. India European Union Relations

### Topic: Economy



**In News:** While India celebrates its 75th year of Independence, it also celebrates 60 years of diplomatic relations with the European Union (EU).

### More on the Topic:

- India-EU relations date to the early 1960s, with India being amongst the first countries to establish diplomatic relations with the European Economic Community.
- A cooperation agreement signed in 1994 took the bilateral relationship beyond trade and economic cooperation.
- At the 5th India-EU Summit at The Hague in 2004, the relationship was upgraded to a 'Strategic Partnership'.
- The two sides adopted a Joint Action Plan in 2005 (which was reviewed in 2008) that provided for strengthening dialogue and consultation mechanisms in the political and economic spheres, enhancing trade and investment, and bringing peoples and cultures together.

### Important Areas of Cooperation between EU and India:

- **Trade:** The EU is India's largest trading partner, while India is the EU's 9th largest trading partner. It is the second-largest destination for Indian exports after the United States.
- The EU's share in foreign investment inflows to India has more than doubled from 8% to 18% in the last decade. This makes the EU an important foreign investor in India.
- India is the benefactor of the **unilateral preferential tariffs** under the EU Generalised Scheme of Preferences (GSP).
- **Security and Defence:** EU and India have instituted several mechanisms for greater cooperation on pressing security challenges like counterterrorism, maritime security, and nuclear non-proliferation.
- **Environment:** EU and India also cooperate closely on the **Clean Ganga initiative** and deal with other water-related challenges in coordinated manner.

- **Science & Technology:** Steering Committee meets annually to review scientific cooperation. Both have official mechanisms in fields such as Digital Communications, 5G technology, Biotechnology, artificial intelligence etc.
- ISRO has a long-standing cooperation with the European Union, since 1970s. It has contributed towards the **EU's satellite navigation system Galileo**.

#### **Present Significance of EU for India:**

- India is **striving for Diversification of global support on international platforms**. (e.g., UNSC). For this EU support is essential.
- BREXIT provides new political and economic dimension in India. For capitalising it needs EU Cooperation.
- India is a long term advocate of **open and safe Indo Pacific**. EU cooperation in this arena is essential.
- India is dealing with **Chinese aggression for a quite long period now**. EU support is needed in dealing with this challenge.

#### **Present Significance of India to EU:**

- Presently EU is trying to Reduce its over-dependence on China. For this India's cooperation is essential.
- Both India and EU shares Common interest in avoiding polarization of global world order.

Source: Indian Express

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## **2. Modernisation of foodgrain storage infrastructure**

### **Topic: Economy**



**In News:** The Ministry of Consumer Affairs, Food & Public Distribution has said it has started the process of modernisation of foodgrain storage infrastructure in the country.

#### **More on the Topic:**

- A new Hub & Spoke Model in Public Private Partnership (PPP) Mode for the development of grain silos across the country has been proposed for the modernisation of food grain storage infrastructure in the country.

- Hub and Spoke Model is a **transportation system which consolidates the transportation assets from standalone locations referred to as “Spoke” to a central location named as “Hub”** for long-distance transportation.
- Hubs have a **dedicated railway siding and container depot facility** while the transportation from Spoke to Hub is undertaken through road and from Hub to Hub via rail.

#### **Advantages of the Model:**

- This model will harness the efficiency of railway siding and promote cost efficiency through bulk storage & movement.
- It will also **reduce cost and time of handling and transportation** and simplifies operational complexities in addition to economic development, infrastructure development & employment generation in the country.
- Besides, Silo are declared as sub Mandi yard which brings **ease of procurement for farmers** and leads to reduction in logistics cost.

#### **Significance of storage:**

- Ensures a steady supply of gains.
- Protects the quality of perishable and semi-perishable products.
- Economic development, infrastructure development & employment generation in the country

**Source: Indian Express**

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## **3. Compostable Plastic**

**Topic: Environment and Ecology**



**In News:** Union Minister of State (Independent Charge) Science & Technology has approved StartUp loan for a company for commercialising “compostable” plastic.

**More on the Topic:**

- This project has received seed funding under NIDHI Prayas (DST), Niti Aayog and UNIDO for the prototype development.
- The composite under the project is a **unique blend of Thermoplastic-Starch (TPS)-glycerin with some chemical modifications** that provides higher strength with low manufacturing cost.
- The granules prepared from this composite can be moulded into any shape and used as per the requirement, and it further breaks down into natural substances once thrown out.

**About Biodegradable Plastics:**

- Biodegradable plastics are made in a way that **they can breakdown or degrade when exposed to the sun’s ultra-violet radiation, enzymes, bacteria, water, or wind abrasion.**
- Biodegradable plastics can be made from 1) a mixture of organic bio-based materials, such as starch and cellulose; 2) biodegradable synthetic polyesters that are fossil-based or 3) bio-based oils, such as sugarcane, which are not always biodegradable.

**About NIDHI, PRAYAS Scheme:**

- Department of Science & Technology has launched a NIDHI program (National Initiative for Developing and Harnessing Innovations) under which programmes for setting up of incubators, seed fund, accelerators and ‘Proof of concept’ grant for innovators and entrepreneurs have been launched.
- Under NIDHI, PRAYAS (Promoting and Accelerating Young and Aspiring innovators & Startups) programme has been initiated in which **established Technology Business Incubators (TBI) are supported with PRAYAS grant to support innovators and entrepreneurs with grants for ‘Proof of Concept’ and developing prototypes.**

Source: Hindu

## 4. Petroleum Coke

**Topic: Economy**

Coke	Coal
It is an amorphous form of carbon	It is a non crystalline form of carbon
It is obtained by heating soft coal in the absence or limited supply of air	It is obtained by the decay of vegetation, which existed millions of years ago

**In News:** Indian companies are importing significant volumes of petroleum coke from Venezuela for the first time.

**More on the Topic:**



- Petroleum coke, or pet coke, is a product produced from all types of oil (light/heavy crudes) during the oil refining process. The heavier the oil (i.e. higher in their carbon content), the more pet coke produced. There are two distinctive grades of Petroleum Coke viz. Calcined Pet Coke and Fuel Grade Pet Coke.
- Fuel Grade Pet Coke, directly comes out of the Coker and is often referred to as Green Coke ("green" means unprocessed). This coke is high in sulphur and heavy metals, and is burned in power plants to generate electricity.
- The further processing of Green Coke produces Calcined Pet Coke (CPC), which is low in sulphur and heavy metals and used to produce aluminium, steel, and as industrial feedstock.

#### What are the key benefits of fuel grade pet coke over coal?

- A tonne of pet coke is more expensive than coal, and produces more energy when burnt.
- Pet coke is a **direct replacement of coal as a fuel** as its gross calorific value is nearly 8000 Kcal/kg which is twice the value of average coal used in electricity generation.
- **The low ash content** makes it a decent fuel for power generation in coal-fired boilers.

#### What are the key environmental challenges in using Pet coke?

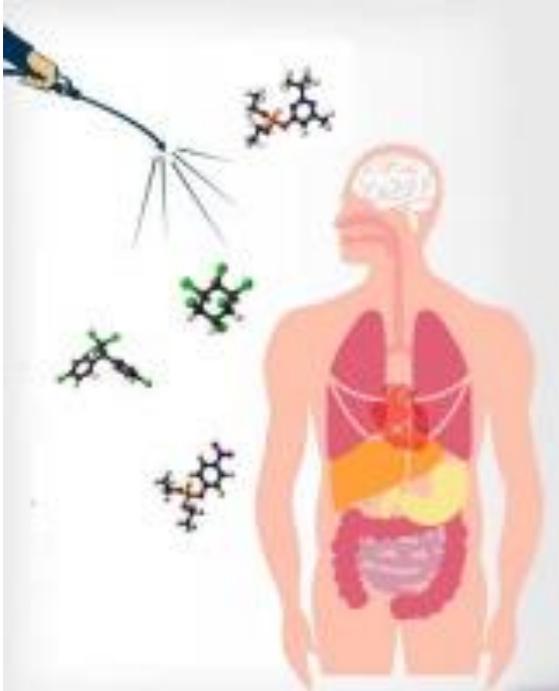
- Pet coke is **over 80 per cent Carbon and emits 5 to 10 per cent more Carbon Dioxide (CO<sub>2</sub>)** than coal on a per unit of energy basis when burned for power.
- At the same time, it is very rich in Sulphur and Volatile Organic Components, which on burning, emit extremely air polluting gases, particularly Sulphur Dioxide (SO<sub>2</sub>).
- However, it is widely used by the cement industry - its largest consumer, as SO<sub>2</sub> emissions, are absorbed by limestone.

Source: Indian Express

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## 5. Unapproved use of chlorpyrifos, fipronil, atrazine and paraquat

**Topic: Environment and Ecology**



**In News:** According to a report by the Pesticide Action Network (PAN) a non-profit body, chlorpyrifos, fipronil, atrazine and paraquat are being used in excess in various states than what has been recommended by the Central Insecticides Board and Registration Committee.

**More on the Topic:**

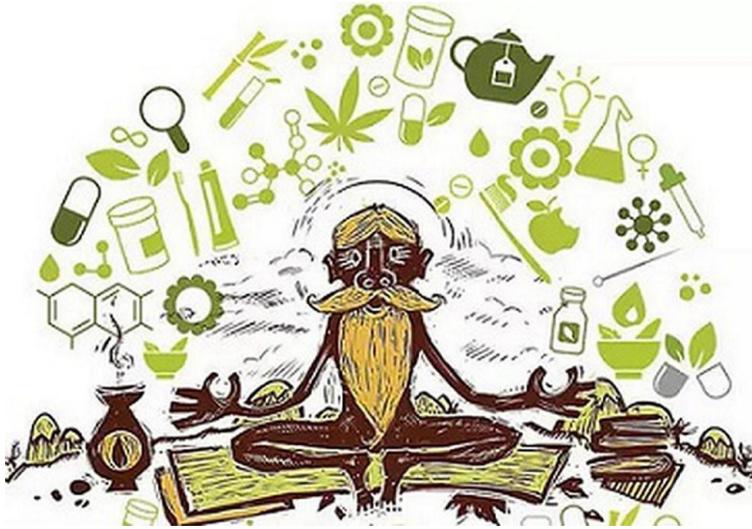
- Central Insecticides Board and Registration Committee, India's pesticides regulator, has approved specific uses of agrochemicals. But state agriculture departments and industries recommended the four chemicals for more crops than their approved use.
- **This points to poor governance of pesticide management** in India that results in exposure of farmers and workers, contamination of agricultural produce and environmental pollution.
- About 20 per cent farmers and 44 per cent workers who participated in the study reported exposure and poor health.

**Source: Business Standard**

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## 6. Ayush Grid Project

**Topic: e-Governance**



**In News:** The Ministry of Ayush has signed a Memorandum of Understanding (MoU) with the Ministry of Electronics and Information Technology (MeitY) for providing technical assistance for the digitalisation of the Ayush Sector under the Ayush Grid project for a span of three years.

**More on the Topic:**

- The Ayush Grid, a proposed central IT platform, is expected to offer numerous IT services for all systems under Ayush, including Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa, and Homeopathy, across functional areas such as healthcare delivery, education, research, capacity building, drug licensing and standardisation, as well as media outreach.
- The components of Ayush Grid initiative **will cover all the verticals of the Ayush Sector**, like Health Services, Education, Ayush Research, Central Sector and Centrally Sponsored Schemes, Training Programmes, Citizen Centric Services, Drug Licencing Portal, and Media Outreach.

**Source: Hindu**

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## 7. Roshini

**Topic: Science and Technology**

**In News:** Union Minister Dr Jitendra Singh launched India's first Saline Water Lantern which uses the sea water to power itself.

**More on the Topic:**

- It uses seawater as the electrolyte between specially designed electrodes to power the LED lamps.
- It is noteworthy that the technology can also be used in hinterlands, where sea water is not available, as any saline water or normal water mixed with the common salt can be used to power the Roshni lantern, which makes it cost-effective and feasible to operate.

**Source: Hindu**



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