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## Double-stack Container Train

- The world's first double-stack long-haul container train was flagged off from New Ateli, Haryana to New Kishanganj, Rajasthan.
- This train is to be operated in the 306-km Rewari-Madar section of the Western dedicated freight corridor (DFC).
- One train carries 360 10-feet container equivalent units (TEU), which is equivalent to 270 high capacity trailer trucks.
- The speed of freight trains is expected to be increased to a maximum of 100 km per hour (kmph) from the current maximum speed of 75 kmph.
- The DFC Corporation of India is currently constructing the Western DFC (1,506 km) and Eastern DFC (1,875 km).
- To know more about the Dedicated Freight Corridor, click here.

## Delhi-Varanasi High Speed Rail Corridor

- The proposed plan for Delhi Varanasi High Speed Rail (DVHSR) Corridor will connect Delhi with major cities like Mathura, Agra, Etawah, Lucknow, Raebareli, Prayagraj, Bhadohi, Varanasi and Ayodhya.
- With the start of Light Detection and Ranging Survey (LiDAR) Survey, HSR work gathered momentum for DVHSR Corridor.

### LiDAR Survey

- National High Speed Rail Corporation Ltd. (NHSRCL) is adopting LiDAR technology for the DVHSR survey.
- Also, NHSRCL has been entrusted to prepare the Detailed Project Reports for seven HSR Corridors.
- LiDAR survey technique will be used for ground survey in all the corridors to provide the ground details faster.
- **Ground survey** is a crucial activity for any infrastructure project as the survey provides accurate details of areas around the alignment.
- This technique uses a combination of Laser data, GPS data, flight parameters and actual photographs to give accurate survey data.
- During the Aerial LiDAR survey, 300 m (150 m on either side) of area around the proposed alignment is being captured for the survey purpose.
- After data collection, 3D Topographical map of 50 m corridor on either side

of the proposed alignment on a scale of 1:2500 will be available for designing of the vertical & horizontal alignment, structures, etc

## Vanadium in Arunachal

- Arunachal Pradesh could be India's prime producer of vanadium.
- [Vanadium - High-value metal used to strengthen steel and titanium.]
- In India, Vanadium is recovered as a by-product from the slag collected from the processing of vanadiferous magnetite ores (iron ore).
- But now promising concentrations of vanadium has been found in the palaeo-proterozoic carbonaceous phyllite rocks in the Depo and Tamang areas of Arunachal Pradesh.
- This was the first report of a primary deposit of vanadium in India with an average grade of 0.76% $V_2O_5$ (vanadium pentoxide).
- Exploration is being carried out by Geological Survey of India (GSI).
- Vanadium mineralisation in Arunachal Pradesh is geologically similar to the "stone coal" vanadium deposits of China in carbonaceous shale.
- This high vanadium content is associated with graphite with fixed carbon content of up to 16%.

### Vanadium

- Vanadium in its pure form is a soft, grey and ductile element which
- It is primarily derived from mined iron ore, carbonaceous shale or phyllites and steel slag.
- Vanadium alloys are durable in extreme temperature and environments, and are corrosion-resistant.
- It increases the fuel-efficiency in automotive and aviation industries due to its high strength-to-weight ratio.
- It forms the integral part of vanadium redox batteries that have the least ecological impact in energy storage.

## Thousand Islands

- Thousand Islands (Kepulauan Seribu) are chain of islands north of Jakarta's coast, Indonesia.
- There are exactly 110 islands that together form a District, encompassing the Pulau Seribu National Marine Park.
- These islands are initially caused by the volcanoes.
- Later, the shifting of tectonic plates results in their consolidation as a grouping of small islands in a relatively small area.

## Saguna Rice Technique

- The Saguna Rice Technique (SRT) technique will help stop the stubble burning in Punjab and Haryana.
- This **zerotill** technique is a unique **Conservation Agriculture** (CA) type of cultivation method.
- This method is used to cultivate rice and related rotation crops without ploughing, puddling and transplanting rice on permanent raised beds.
- The **SRT iron forma** tool facilitates planting of crop in predetermined distances enabling precise plant population per unit area.
- The important principles are:

1. SRT insists that all roots and small portion of stem should be left in the beds for slow rotting.
2. No ploughing, puddling and hoeing to be done to control weeds.
3. SRT will get the crop ready for harvesting 8 to 10 days earlier.
4. Take this into consideration while choosing a variety to avoid getting harvesting caught in receding rain.

## India's GDP 2020-2021

- Gross Domestic Product (GDP) is the total value of all final goods and services produced within the country in one financial year.
- Ministry of Statistics and Programme Implementation released the First Advance Estimates (FAE) for the financial year 2020-2021.
- The key takeaways from the FAE 2020-21 is that India's GDP will contract by 7.7% in 2020-21.
- The MoSPI's FAE provides India's GDP, real GDP, per capita real GDP, Gross Value Added, Private Final Consumption Expenditure (PFCE), per capita PFCE, Gross Fixed Capital Formation (GFCF), etc.,

### First Advance Estimates

- For any financial year, the MoSPI provides regular estimates of GDP.
- The first such instance is through the FAE. The FAE for any particular financial year is presented on 7$^{th}$ January.
- The FAE are arrived at before the end of the concerned financial year by extrapolating the available data.
- The MoSPI's approach for compiling the Advance Estimates is based on Benchmark-Indicator method.

### Terminologies

- **Real GDP** is the GDP without the influence of inflation.
- **Gross Value Added** maps the value-added by different sectors of the

economy such as agriculture, industry and services.

- In other words, GVA provides a proxy for the income earned by people involved in the various sectors.
- **Private Final Consumption Expenditure** includes all the things that a household would buy in their private individual capacity.
- PFCE constitutes over 56% of the total GDP.
- It is the biggest demand for goods and services comes from private individuals trying to satisfy their consumption needs.
- **Gross Fixed Capital Formation** is a type of demand that accounts for close to 28% of India's GDP.
- Taken together, private demand and business demand account for almost 85% of all GDP.

**Source: PIB, The Indian Express, The Hindu, Business Line, Hindustan Times, Business Standard**

