

IMPORTANT NEWS

GSTN Launches Geocoding in All States and UTs

Inside Story of the News:

- **The GST Network (GSTN) has made the geocoding capabilities available for all states and union territories** amid worries about fake registrations and fraudulently claiming input tax credits under the Goods and Services Tax (GST) system.
- To verify the quality of address information in GSTN records and speed up the address location and verification process, geocoding—the conversion of an address or description of a location into geographic coordinates—has been adopted.
- GST Network has already geocoded 1.8 crore principal places of businesses.
- For normal, composition, SEZ units, SEZ developers, input service distributors, and casual taxpayers who are active, cancelled, and suspended, the functionality is provided.
- Once the geocoding information is entered, the geocoding link won't be available on the portal. The address cannot be changed after submission for this one-time activity. Taxpayers who have already geocoded their addresses through new registration or core amendment will not be able to use the service. Only via the core amendment method is it possible to update the address that appears on the registration certificate. The previously saved address record would not be impacted by this geocoding functionality.
- After March 2022, all new addresses are geocoded at the moment of registration, guaranteeing the precision and uniformity of address data from the outset.
- Businesses can access the geocoding functionality on the portal, where the geocoded address generated by the system will be shown. Depending on their needs, businesses can either accept it or update it.
- When the system-generated geocoded address is not available, a blank will be shown, and the geocoded address can then be updated.

PAU Develops New Wheat Variety

Inside Story of the News:

- **The Ludhiana-based Punjab Agricultural University (PAU)**, which was instrumental in creating high-yielding strains during the Green Revolution to make India a foodgrain surplus, **has created a new wheat variety with a high amylose starch content**, known to lower risks of type-2 diabetes and cardiovascular diseases.

Lower Glycemic Index				
	New variety	Checks (Comparison with other varieties)		
	PBW RS1	PBW 550	PBW 725	PBW 766
Chapati	43.1	66.7	66.9	65.3
Atta biscuits	32.4	51.4	54.6	52.2

- Consuming chapatis produced from this wheat, also known as PBW RS1 (RS stands for resistant starch), won't result in a sharp rise in blood glucose levels right away.
- Instead, the high amylose and resistant starch make sure that the bloodstream is liberated of glucose more gradually.
- A person who consumes four chapatis made from regular wheat would now feel satisfied after just two due to the slower rate of digestion.
- Its total starch level is essentially identical to that of other wheat cultivars, which range from 66 to 70%.
- However, display trials undertaken by PAU over a four-year period revealed that it had a 30% resistant starch content, compared to only 7.5–10% for other types, such as PBW 550, PBW 725, HD 3086, and PBW 766.
- The non-resistant starch proportion of the other kinds ranges from 56 to 62 percent, compared to 37.1% in PWB RS1.
- Similar to how other types only have 21–22% amylose, PBW RS1 has 56.63% of it.
- Due to the reduced digestion of the starch, chapatis and biscuits produced with its whole grain flour also have a lower glycemic index (a value used to gauge how quickly certain foods raise blood sugar levels).
- As a result, it can aid in reducing the frequency of dietary-related illnesses like obesity and diabetes (particularly type 2).
- The variety has been developed by a team of wheat breeders over the course of ten years.
- PAU is the first to generate this variety by fusing five unique alleles (genes) influencing the levels of resistant starch.
- Earlier, PAU had released two varieties – PBW Zn1 with high zinc content, and PBW1 Chapati whose flour had premium chapati quality that remained fresh for long – on nutritional lines but none had features as PBW RS1.
- However, PBW RS1 has a severe flaw that can prevent farmers from growing it. At PAU's field trials, the variety had an average grain yield of 43.18 quintals per hectare. This is less than Punjab's 48 quintal average output, which has occasionally reached 52 quintals with many farmers reaping 60 quintals or more.
- Farmers will be able to plant the new variety's seeds in the forthcoming rabi season after receiving them in September.
- PBW RS1 is "completely resistant" to yellow rust and "moderately resistant" to brown rust fungal infections, in addition to its nutritional qualities.

ISRO Launches Chandrayaan-3

Inside Story of the News:

- **The Chandrayaan-3 lunar mission**, which aims at exploring the Moon, was launched on July 14, 2023, by India's space agency, the Indian Space Research Organisation (ISRO).
- The third lunar mission will advance space discovery and innovation by building on the achievements of its predecessors, Chandrayaan-1 and Chandrayaan-2.
- Chandrayaan-3 has been launched from the Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh less than four years after Chandrayaan-2.
- It is mounted atop ISRO's largest and most powerful rocket, **the Launch Vehicle Mark III (LVM3)**, also called **the Geosynchronous Satellite Launch Vehicle Mark III (GSLV-MK III)**.
- The mission is a shining illustration of India's increasing dedication to strengthening its position in the global space community.
- India will become the fourth country to successfully perform a soft landing of a spacecraft on Earth's natural satellite if this mission is successful.
- According to S. Somanath, Chairman of the ISRO, the mission's Vikram lander is scheduled to soft-land on the Moon's South Pole region on August 23 at 5:47 p.m.
- The lander for this mission has undergone significant modifications according to the space agency:
 - A stronger set of 'legs' for the lander,
 - the capacity to tolerate a faster descent velocity,
 - the reduction of the number of engines from five to four,
 - an increase in the amount of propellant,
 - a larger solar panel surface area, and
 - new sensors have been added.

About Chandrayaan-2:

- Chandrayaan-2 successfully landed the Vikram lander and Pragyan rover close to the Moon's South Pole in 2019.
- But there were some minor difficulties for the endeavour. While trying to land on the moon, the Vikram lander from Chandrayaan-2 had crashed.
- Despite the incident, it nonetheless represented a major accomplishment in India's space history.

About Chandrayaan-3:

- Because Chandrayaan-3 is LVM3's fourth operational mission, it is often referred to as the LVM3-M4 mission.
- Conducting in-situ scientific experiments, wandering on the lunar surface, developing and demonstrating new technologies needed for interplanetary missions, and demonstrating soft landings are among the mission's goals.
- A lander, a rover, and a propulsion module make up Chandrayaan-3.
 - The lander and rover together make up the lander module. The lander is coupled with the rover.

- The lander module will be transported to a 100-kilometer circular lunar orbit by the propulsion module.
- The lander module and the propulsion module will then separate.
- Chandrayaan-3 has three phases: the Earth-centric phase, the lunar transfer phase, and the Moon-centric phase.
 - The pre-launch phase, launch and ascent phase, and the Earth-bound manoeuvre phase—which will assist the Chandrayaan-3 spacecraft in changing its course—make up the Earth-centric phase, or Phase-1.
 - The transfer trajectory phase is a part of the lunar transfer phase, during which Chandrayaan-3 will select the course that will take it into the lunar orbit.
 - The entire process, from placing the moon in orbit through landing, falls under the Moon-centric phase.
- LVM3-M4 features two stages, a payload fairing, two strap-on motors, a lift-off mass of 642 tonnes, and a height of 43.5 metres.
- The two stages are: L110 and C25. Liquid fuel will be carried by the L110 stage and cryogenic fuel by the C25 stage.

New Plant Species *Salsola oppositifolia* Desfontania Discovered

Inside Story of the News:

- ***Salsola oppositifolia* Desfontania**, a new species of saltwort, has been discovered by a team of researchers from Gandhinagar's Gujarat Ecological Education and Research (GEER) Foundation.
- It is a perennial shrub that thrives in saline, arid to semi-arid settings of the Kutch district.
- The newest edition of Plant Discoveries, an annual compendium published by the Botanical Survey of India (BSI) since 2007, features a report on the discovery of *Salsola oppositifolia* Desfontania, a species that is a member of the Amaranthaceae family.
- Based on a collection made from Khadir Bet, Kutch, Gujarat at 15.5 m altitude, this species, which was previously known from Italy, Northern Africa, Palestine, Spain, and the Western Sahara, has been reported for the first time from India.

About *Salsola oppositifolia* Desfontania and Other *Salsola* Species:

- The new plant species is described in the paper as a perennial succulent shrub with a smooth, cylindrical, woody base that can reach heights of one to two meters.
- It rarely becomes prostrate and lacks hairs, unlike other *Salsola* species.
- The leaves of this plant grow in opposition to one another in the stem, as implied by its scientific name, *oppositifolia*.
- It is a halophyte, a plant that can survive in saline conditions.
- *Salsola oppositifolia* Desfontania was discovered on the rocky and pebbled hilly outcrops of Khadir and Bela islands in the Great Rann of Kutch (GRK) in the eastern part of Kutch, according to researchers who studied the flora and fauna of the area.
- *Salsola oppositifolia* Desfontania is the sixth species of *Salsola* genus to be discovered in India.

- Prior to this discovery, India had been home to *Salsola kali*, *Salsola hatmanii*, *Salsola monopectera*, *Caroxylon imbricatum* (*Salsola baryosma*), and *Halogeton glomeratus* (*Salsola glomerata*). Additionally, *Salsola baryosma* had previously been noted in GRK.
- The leaves of *Salsola* genus plants contain salty juice.
- For the manufacture of soda ash, *Salsola oppositifolia* is used as a raw material.
- Other *Salsola* species are employed in the production of lye and soaps, and studies have revealed that these species are likewise abundant in pharmacological properties.
- Additionally, halophytes, *Suaeda nudiflora* and *Suaeda fruticosa* are used as fodder in Kutch.
- *Salsola fruticosa* is also a species palatable to the Indian Wild Ass.

India Lifts 415 Million People Out of Poverty within 15 Years

Inside Story of the News:

- According to a recent UN report, **India saw a total of 415 million people move out of poverty in just 15 years**, from 2005/2006 to 2019/2021, with incidence falling from 55.1% in 2005/2006 to 16.4% in 2019/2021.
- The United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford released the most recent update of the global Multidimensional Poverty Index (MPI).
- Within 15 years, 25 countries, including India, effectively cut their global MPI values in half, demonstrating that quick advancement is possible. These countries include Cambodia, China, Congo, Honduras, India, Indonesia, Morocco, Serbia, and Vietnam.
- India surpassed China earlier in April to overtake it as the world's most populous country, with 142.86 crore people.
- Approximately 645 million individuals in India experienced multidimensional poverty in 2005–2006; this number dropped to 370 million in 2015–2016 and 230 million in 2019–2021.
- The report also stated that India's deprivation levels decreased across the board and that "the poorest states and groups, including children and people in disadvantaged caste groups, had the fastest absolute progress."
- According to the report, child mortality decreased from 4.5% to 1.5%, and the percentage of individuals in India who are multidimensionally poor and deprived under the nutrition indicator decreased from 44.3% in 2005/2006 to 11.8% in 2019/2021.
- In the drinking water indicator, the percentage of people who were multidimensionally poor and deprived decreased from 16.4 in 2005/2006 to 2.7 in 2019/2021.
- The percentage of people who were multidimensionally poor and deprived decreased for housing (from 44.9% to 13.6%) and electricity (from 29% to 2.1%).
- Poor people who lack access to cooking fuel have decreased from 52.9% to 13.9%, and those who lack access to sanitary facilities have decreased from 50.4% in 2005/2006 to 11.3% in 2019/2021.
- According to the report, nations with varying rates of poverty similarly saw a halving of their global MPI value. India and Congo had a starting incidence exceeding 50%, compared to 17 other countries that did so with an incidence under 25% in the first period.
- India was one of the 19 nations whose Multidimensional Poverty Index (MPI) values fell by half worldwide between 2005/2006 and 2015/2016.

India Tops the Medal Tally at the 34th IBO

Inside Story of the News:

- Every student from India won a gold medal at **the 34th International Biology Olympiad (IBO) 2023**, which took place in Al Ain, United Arab Emirates, from July 3 to July 11, 2023.
- India's performance at IBO was its first all-gold effort.
- Additionally, it is the first time that India has led the Olympic medal count.
- This year's IBO featured 293 students from 76 different nations.
- **After India, Singapore was the only other country to secure four gold medals.**
- 29 gold medals in total were given out.
- In the past, India has won the most medals in the following categories: Junior Science (in 2014, 2019, 2021, and 2022), Physics (in 2018), and Astronomy & Astrophysics (in 2008, 2009, 2010, 2011, 2015, and 2021).

Differential Global Navigation Satellite System (DGNSS) 'SAGAR SAMPARK' Inaugurated

Inside Story of the News:

- The Ministry of Ports, Shipping, and Waterways is dedicated to innovation, the construction of top-notch infrastructure, and the development of the Indian maritime industry.
- **The indigenous Differential Global Navigation Satellite System (DGNSS) 'SAGAR SAMPARK' was recently inaugurated** by Union Minister of Ports, Shipping and Waterways, Shri Sarbananda Sonowal, to further the digital initiative in the marine sector.
- DGNSS is a terrestrial based enhancement system that fixes the errors and inaccuracies in the Global Navigation Satellite System (GNSS) so that more precise positioning information is available.
- The 'Sagar Sampark - Differential Global Navigation Satellite System (DGNSS)' launch at 6 locations under the DGLL would unquestionably improve the DGLL's capacity in the field of the Radio Aids to Marine Navigation.
- In addition to assisting mariners with safe navigation, the DGNSS service will lower the possibility of collisions, groundings, and mishaps in the port and harbour areas. This will result in efficient and safe vessel movement.
- DGNSS is an important Radio Aid to Navigation towards fulfilment of international obligations of International Maritime Organisation (IMO), Safety of Life at Sea (SOLAS) and International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA).
- The Global Navigation Satellite System (GLONASS) and GPS have been recapitalized, and DGNSS further boosts availability and redundancy in accordance with international standards and aids mariners in improving their positioning to within 5 meters.
- GPS and GLONASS corrections can now be transmitted using the most recent DGNSS system.

- The DGNS greatly enhances GPS positioning accuracy by minimizing errors brought on by atmospheric inferences, satellite clock drift, and other factors.
- For 100 nautical miles away from Indian shores, the error correction precision has been increased from 5 to 10 meters to less than 5 meters.

PM Modi Conferred with France's Highest Honour

Inside Story of the News:

- **The Grand Cross of the Legion of Honour, France's highest honour, was presented to Prime Minister Narendra Modi** by French President Emmanuel Macron while he was in France on an official visit.
- The Legion of Honour is the reward for “outstanding merit acquired in the service of the nation in a civilian or military capacity”.
- Foreigners who have contributed to France's culture or economy or who have backed French causes like human rights, press freedom, or humanitarian work are eligible for the Legion of Honour decoration.
- In accordance with diplomatic reciprocity and in support of France's foreign policy, state visits are also an opportunity to bestow the Legion of Honour to official persons.
- During his two-day state visit to France, Prime Minister Modi attended Friday's celebrations of French National Day (Bastille Day) as the Guest of Honour.