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MK Yadav Sir

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ECONOMIC TIMES

Page 4

GST RATE SLABS

(Syllabus: GS Paper 3 - Economy)

Top Gaming Cos Urge Govt Not to Raise GST to 28%

NO GAME In a letter to CBIC, cos say e-gaming industry needs to be treated on a par with IT service providers

Dia.Rekhi@timesgroup.com

Chennai: A group of top online gaming firms has sent a representation through the Ficci Gaming Committee to the Central Board of Indirect Taxes & Customs (CBIC), urging the body not to hike the GST rate for the sector to 28% from 18% as suggested by ministers' panel.

"This (recommendation) is a major shift from the current tax regime of charging GST on the platform fee/ gross gaming revenue (GGR) at the rate of 18%," the companies wrote in a letter, which the Ficci Gaming Committee submitted to the board on Friday. "If the changes recommended by the GoM (group of ministers) are given effect, then the online gaming industry will be adversely impacted," it added.

ET has seen a copy of the letter.

Members of the FICCI Gaming Committee include Dream11, MPL, Zupee, Games 24x7, HDworks, MyTeam11, Nazara Technologies, Krafton and Winzo, among others.

The group submitted its report in May 2022 to the 47th GST Council, recommending a 28% GST rate on online games. It also recommended that this be levied on the entire stake value, which is inclusive of gross gaming revenue (GGR) and the prize pool formed by the players.

Queries sent to the companies remained unanswered as of press time Friday.

In their representation to Vivek Johri, chairman of the CBIC, the companies which are among the members of the FICCI Gaming Committee said they merely provide a platform to users and argued that only the income generated by such companies should be subjected to GST.

"Online gaming industry needs to be treated at par with information technology service providers," the letter said. "As per the current practices followed by the online skill-based gaming companies, tax is paid at 18% on the platform fees (GGR) charged from players."

The companies said a change in GST rate from 18% on GGR to 28% would be "extremely detrimental to the survival of the online gaming industry as no business operations can survive with such high taxation". Also, the impact of charging GST on the entire stake value – whether at the rate of 28% or 18% – would be equally disastrous for the online gaming industry, they said.

Context: A group of top online gaming firms has sent a representation through the Ficci Gaming Committee to the Central Board of Indirect Taxes & Customs (CBIC), urging the body not to hike the **GST rate for the sector to 28% from 18%** as suggested by ministers' panel.

- This recommendation is a **major shift from the current tax regime** of charging GST on the platform fee/ gross gaming revenue (GGR) at the rate of 18%.

GST slabs

- There are **four major GST slabs: 5%, 12%, 18% and 28%.**
- Some **demerit and luxury goods**, which are in the 28% bracket, attract additional levy of cesses, the proceeds of which go to a separate fund meant to compensate states for revenue shortfall and repayment of compensation related loans.

GST Tax Structure

- **Central GST (CGST)** covers Excise duty, Service tax etc.
- **State GST (SGST)** covers Value Added Tax (VAT), luxury tax etc.
- **Integrated GST (IGST)** covers inter-state trade.
    - **IGST is not a tax** but a system to coordinate state and union taxes.

LIVE MINT

Page 14

NPPA

(Syllabus: GS Paper 3 - Economy)

NPPA expands price control to 23 additional drugs

Priyanka Sharma
priyanka.sharma@livemint.com
NEW DELHI



The move will make drugs cheaper for patients. MINT

The National Pharmaceutical Pricing Authority (NPPA) has fixed the ceiling price of 18 formulations, and retail price of 23 new drugs by bringing them under price control. These drugs are largely used for treatment of rheumatoid arthritis, pain management, tuberculosis (TB), type 2 diabetes, respiratory illnesses and allergies.

With the latest directions, all drug manufacturers have been asked to revise prices of these formulations.

The move will make drugs cheaper for patients. Manufacturers not complying with the ceiling price will have to deposit the overcharged amount with the government.

According to the latest government notification, the drug price regulator has fixed the ceiling price of Gliclazide ER and Metformin used for diabetes control at ₹10.30, while Amoxycillin and Potassium Clavulanate Oral Suspension IP price has been fixed at ₹4.05. Similarly, the price of Aceclofenac + Paracetamol + Serratiopeptidase tablet, commonly used for pain management, has been fixed at ₹5.23. Ceiling prices of drugs like Diclofenac Diethylamine, Methyl Salicylate, and Formoterol Fumarate have also been capped.

Additionally, new drug formulations such as Thiopentone's ceiling price has been fixed at ₹55.32 for a 1gm vial, which is commonly used as anesthesia. In addition, the cost of Warfarin 5mg, used for treating blood clots, has been fixed at ₹2.40. Also, Clofazimine 100mg, used for treating infectious diseases, has been fixed at ₹3.98.

"All manufacturers of scheduled formulation, selling the branded or generic or both the versions of scheduled formulations at a price higher than the ceiling price shall revise the prices of all such formulations downward not exceeding the ceiling price plus goods and services tax as applicable if any," according to a government notification.

Manufacturers not complying with the ceiling price will have to deposit the overcharged amount with govt

Queries sent to the department of pharmaceuticals didn't elicit any response.

Furthermore, it has been made mandatory for drug makers to issue a price list of drugs to the regulator through Integrated Pharmaceutical Database Management System (IPDMS) and also submit a copy to the respective state drug controller and dealers.

Pharmaceutical makers of drug formulations having the maximum retail price (MRP) lower than the ceiling price shall continue to maintain the existing MRP.

Context: The drug price regulator - **National Pharmaceutical Pricing Authority (NPPA)** - has fixed the ceiling price of 18 formulations, and retail price of 23 new drugs by bringing them under price control.

- These drugs are **largely used for treatment of rheumatoid arthritis,** pain management, tuberculosis (TB), type 2 diabetes, respiratory illnesses and allergies.

National Pharmaceutical Pricing Authority

- **About**: It is a **government regulatory agency** that controls the prices of pharmaceutical drugs in India.
- **Nodal Ministry**: It was constituted vide Government of India Resolution in 1997 as an attached office of the Department of Pharmaceuticals (DoP), **Ministry of Chemicals and Fertilizers** as an independent Regulator for pricing of drugs and to ensure availability and accessibility of medicines at affordable prices.
- **Functions:**
  - To implement and enforce the provisions of the **Drugs (Prices Control) Order** in accordance with the powers delegated to it.
  - To deal with all **legal matters** arising out of the decisions of the Authority.
  - To **monitor the availability of drugs,** identify shortages, if any, and take remedial steps.
  - To c**ollect/ maintain data on production**, exports and imports, market share of individual companies, the profitability of companies etc, for bulk drugs and formulations.
  - To undertake and/ or sponsor **relevant studies** in respect of the pricing of drugs/ pharmaceuticals.
  - To recruit/ appoint the officers and other staff members of the Authority, as per **rules and procedures laid down by the Government.**
  - To render **advice to the Central Government** on changes/ revisions in drug policy.
  - To help the Central Government in **parliamentary matters** relating to the drug pricing.

BUSINESS STANDARD

Page 2

SPECTRUM ALLOCATION

(Syllabus: GS Paper 3 - Infrastructure)

Spectrum allocation for satellite is in sync with SC order: SpaceX

SURAJEET DAS GUPTA
New Delhi, 9 June

In a strong pitch to the Indian regulator, Elon Musk's SpaceX has justified 'administrative' allocation of spectrum for satellite communications, saying it is in consonance with a 2012 Supreme Court order.

The order specified that when 'transferring' or 'alienating' all scarce natural resources, the state must opt for an auction.

In its communication to TRAI, SpaceX has said the focus of the Ministry of Communications and TRAI will be on ensuring that any spectrum assignment process complies with the order, which was given during the cancellation of many 2G licences. It also recognises that TRAI's assignment method must not be 'overly subject to legal challenge'.

SpaceX was responding to the consultation paper floated by TRAI on the best way to assign spectrum: auction, administratively or through any other method of allocation.

The company points out that "The Hon'ble Supreme Court notes (as part of the 2012 judgement) that "[...] while transferring or alienating the natural resources, the state is duty bound to adopt the method of auction [...]".

In its response, SpaceX observes that the ruling 'did not discuss the technical possibility of shared use by satellites'.

"In the case of shared access by all satellite providers, spectrum is neither 'transferred' nor 'alienated'. Its use by one operator does not prevent use by another," SpaceX argued. This, it goes on to say, is also essential to ensure a predictable rollout and operating environment for all satellite operators as well as users.

SpaceX had made it clear that its strongest recommendation is that TRAI must guarantee certain essential technical requirements that are fundamental for LEO and NGSO systems to be able to provide a service, especially shared access nationwide to the entirety of the critical bands allocated to satellite services for all satellite operators.

In mobile services, the allocation of spectrum is exclusively for the use of the operator.

The company's interpretation of the Supreme Court order opens up the debate on whether the government needs to auction all the spectrum available or whether it has the powers to assign it administratively, as it does for backhaul spectrum and for VSAT operators.

CASE STUDY

- 2012 Supreme Court order: When 'transferring' or 'alienating' all scarce natural resources, the state must opt for an auction
- SpaceX said the focus of the Ministry of Communications and TRAI will be on ensuring that any spectrum assignment process complies with the order
- SpaceX observed that the ruling 'did not discuss the technical possibility of shared use by satellites'
- Communication recognised that TRAI's assignment method must not be 'overly subject to legal challenge'
- SpaceX was responding to the consultation paper floated by TRAI



Context: In a strong pitch to the Indian regulator, SpaceX has justified 'administrative' **allocation of spectrum** for satellite communications, saying it is in consonance with a 2012 Supreme Court order.

- The company points out that "The Hon'ble Supreme Court notes (as part of the 2012 judgement) that "while transferring or alienating the natural resources, the **state is duty bound to adopt the method of auction".**

Spectrum auctions

- **About**: A spectrum auction is a process whereby a government uses an auction system to **sell the rights to transmit signals** over specific bands of the electromagnetic spectrum and to assign scarce spectrum resources.
  - Devices such as cellphones and wireline telephones require signals to connect from one end to another.
  - These signals are carried on airwaves, which must be **sent at designated frequencies** to avoid any kind of interference.
- **Owner**: The **Union government owns all the publicly available assets** within the geographical boundaries of the country, which also include airwaves.
  - With the expansion in the number of cellphone, wireline telephone and internet users, the need to provide more space for the signals arises from time to time.
- **Nodal Department:** To sell these assets to companies willing to set up the required infrastructure to transport these waves from one end to another, the central government through the **Department of Telecom (Ministry of Communications)** auctions these airwaves from time to time.
  - These airwaves are called spectrum, which is subdivided into bands which have varying frequencies.
  - All these airwaves are sold for a certain period of time, after which their validity lapses, which is generally set at 20 years.

THE HINDU Page 10

DIARRHOEA

(Syllabus: GS Paper 2 - Health)

Piped potable water across India will avert 4,00,000 diarrhoea deaths, finds WHO

The Centre says it will achieve 100% coverage under the Jal Jeevan Mission by 2024; so far five States, including Gujarat, Telangana, Haryana and Punjab, have reported full coverage

Jacob Koshy
NEW DELHI

If the Centre succeeds in its marquee Jal Jeevan Mission (JJM), a nearly ₹3.6 trillion enterprise to provide piped potable water to all of India, it would avert close to 4,00,000 deaths from diarrhoea, a modelling study by the World Health Organization (WHO) and commissioned by the Jal Shakti Ministry, said on Friday.

Additionally, this would avoid 14 million DALYs (Disability Adjusted Life Years) from diarrhoea, save close to $101 billion and 66.6 million hours every day of time that would otherwise have been spent – predominantly by women – collecting water, the authors of the study noted. A DALY represents the loss of the equivalent of one year of full health and are a way to account for the years of life lost due to premature mortality (YLLs) and the years lived with a disability (YLDs), due to prevalent cases of a disease or a health condition, in a population.



About 62% of rural households have piped water connections; the rest have to find water from other sources. K.V.S. GIRI

Currently about 12.3 crore rural households, or 62%, have piped water connections up from 3.2 crore or about 16.6% from 2019 when the scheme was launched. The Centre has claimed that it will achieve 100% coverage by 2024. A fully functional tap water connection is defined as a household getting at least 55 litres of per capita per day of potable water all through the year.

The WHO study is an extrapolation and doesn't compute the number of diarrhoeal deaths averted, at the present levels of coverage. It also doesn't account for the degree of contamination in the piped water now being made available, Dr. Rick Johnston of the WHO and one of the study authors told *The Hindu*. For the data required to arrive at its estimates, the authors used population data from the United Nations, the 2018 National Sample Survey and data on water quality collected by the JJM.

"Currently a potable water connection is being provided every second. Five States including Gujarat, Telangana, Goa, Haryana, and Punjab and 3 Union Territories – Andaman & Nicobar Islands, Daman Diu & Dadra Nagar Haveli and Puducherry have reported 100% coverage. Himachal Pradesh at 98.87%, followed by Bihar at 96.30%, are also poised to achieve saturation in near future," Vini Mahajan, Secretary, Department of Drinking Water and Sanitation, said at an event to publicise the report. "Every dollar invested in sanitation interventions gives a $4.3 return in the form of reduced health care costs," he added.

Context: According to a study by WHO, about **62% of rural households have piped water connections** through **Jal Jeevan Mission;** the rest have to find water from other sources.

- A nearly ₹3.6 trillion enterprise to provide piped potable water to all of India, it would succeed in averting close to 4,00,000 deaths from diarrhoea.

Key Points

- Currently about 12.3 crore rural households, or **62%, have piped water connections** up from 3.2 crore or about 16.6% from 2019 when the scheme was launched.
- This would avoid 14 million **DALYS (Disability Adjusted Life Years)** from diarrhoea, save close to $101 billion and 66.6 million hours every day of time that would otherwise have been spent - predominantly by women - collecting water.
- A **DALY represents the loss of the equivalent of one year** of full health and are a way to account for the years of life lost due to premature mortality (YLLs) and the years lived with a disability (YLDs), due to prevalent cases of a disease or a health condition, in a population.
- The Centre has claimed that it will **achieve 100% coverage by 2024.**
- A **fully functional tap water connection** is defined as a household getting at least 55 litres of per capita per day of potable water all through the year.

Diarrhoea

- Diarrhea is the condition of having at least **three loose, liquid, or watery bowel movements each day.**
- The most common cause is an **infection of the intestines** due to either a virus, bacterium, or parasite - a condition also known as gastroenteritis.
- Diarrhea can be **prevented by improved sanitation, clean drinking water, and hand washing** with soap.

PIB June 10

HAR GHAR JAL PROGRAM

(Syllabus: GS Paper 2 - Health)

WHO report highlights significant impact of 'Har Ghar Jal' Program on Public Health and Economic Savings

Context: WHO report highlighted significant impact of **'Har Ghar Jal' Program** on Public Health and Economic Savings.

- The **World Health Organization (WHO)** monitors various **Sustainable Development Goal (SDG)** indicators, including the proportion of the population using safely managed drinking water services (Indicator 6.1.1) and mortality related to unsafe water, sanitation, and hygiene (Indicator 3.9.2).
- WHO has **developed methods and tools to estimate the health gains** associated with improvements in water, sanitation, and hygiene, particularly in reducing diarrheal diseases and other related health outcomes.

'Har Ghar Jal' Program

- The Har Ghar Jal Programme, implemented by the **Jal Jeevan Mission under the Ministry of Jal Shakti,** was announced by Prime Minister on August 15, 2019.
- The program aims to **provide every rural household with affordable and regular access** to an adequate supply of safe drinking water through taps.
- The program's components align with the WHO/UNICEF J**oint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP)** to monitor progress on SDG 6.1 for safely managed drinking water services.
- In August 2022, **Goa and Dadra and Nagar Haveli and Daman and Diu** became the first 'Har Ghar Jal' certified State and UT respectively with 100% tap-water access.

DTE June 10

FOOD SYSTEMS

(Syllabus: GS Paper 3 - Env & Eco)



Bonn Climate Change Conference

- Every year, **climate negotiators** meet in Bonn, Germany, for two weeks.
- This session serves as an important marker on the **road to the annual COP climate talks.**
- **Bonn Climate Change Conference** is also known as:
  - COP 23 (UNFCCC)
  - CMP 13 (Kyoto Protocol)
  - CMA 1-2 or 1.2 (Paris Agreement)

Context: Pathways for **food systems transformation** report released by the Food Systems Partnership on June 8, 2023, called for food and agriculture to be central to global climate dialogue and negotiations**.**

- It was launched on the fourth day of the **Bonn Climate Change Conference**, which is expected to lay the groundwork for the global stocktake and negotiations at the COP28 climate summit in Dubai later this year.

Key Points

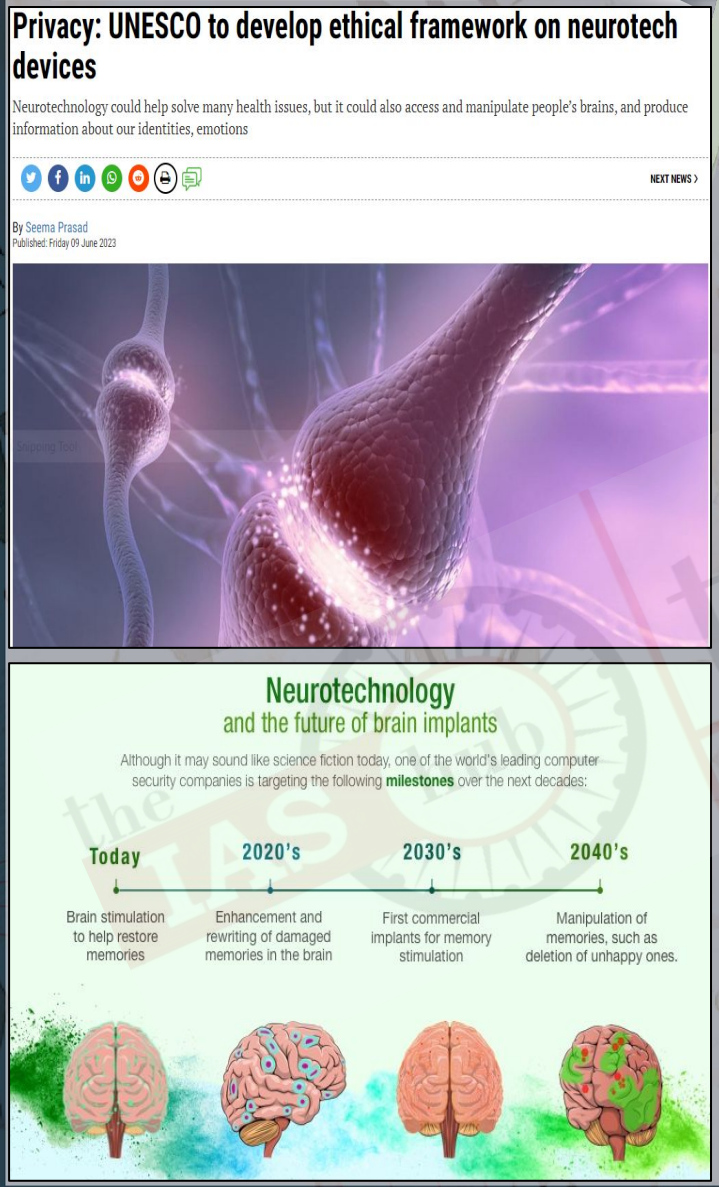
- **Agrifood systems** contribute to around 30 per cent of global emissions but hardly receive due attention in global climate negotiations.
- Most countries were **yet to realise the full potential of including and implementing action on food systems** in their climate strategies and action plans.
- **COP27 failed** to fully recognise the role of food systems in strengthening climate adaptation, mitigation and resilience.
- The report outlines **six themes for parties** to embed throughout the negotiations in Bonn and beyond:
  - Enhance **collaboration and inclusion** at all levels and across all parts of our food systems.
  - Enable a **transition to healthy, nutritious and sustainable diets** for all.
  - Embrace **agricultural reform a**nd nature-positive production.
  - Increase action against **food loss and waste.**
  - **Transform financial mechanisms** to support sustainable, equitable food systems.
  - Champion consistent, accurate monitoring and reporting to **track global progress on implementation.**
- During a technical dialogue, India has a demand of the **Global Stocktake** to be guided by the principles of equity and historical responsibility i.e. mitigation burden should not be redistributed among developing nations who did not contribute to the problem.

DTE

June 10

NEUROTECHNOLOGY

(Syllabus: GS Paper 3 - Sci & Tech)



Privacy: UNESCO to develop ethical framework on neurotech devices

Neurotechnology could help solve many health issues, but it could also access and manipulate people's brains, and produce information about our identities, emotions

NEXT NEWS >

By Seema Prasad
Published: Friday 09 June 2023

Context: The **United Nations Educational, Scientific and Cultural Organization (UNESCO)** is all set to host an international conference to develop an ethical framework for the usage of **neurotech** devices that feed brain-wave data to computers through dry electrodes and implants.

Key Points

- The conference aims to lay the foundation for a **global ethical framework.**
- It will be guided by a report by UNESCO International Bioethics Committee on the **"Ethical Issues of Neurotechnology".**
- Deep **brain stimulation (DBS)** is approved to treat a number of conditions, such as Parkinson's disease, essential tremor, dystonia, epilepsy and obsessive-compulsive disorder.
- **DBS** is also being studied as a potential treatment for major depression, traumatic brain injury, stroke recovery, addiction, chronic pain, cluster headache, dementia, Tourette syndrome, Huntington's disease and multiple sclerosis.
- UNESCO strives to **develop a framework similar to the established global ethical frameworks** on the human genome (1997), human genetic data (2003) and artificial intelligence (2021).

Neurotechnology

- **Neurotechnology** encompasses any method or electronic device which interfaces with the nervous system to monitor or modulate neural activity.
- Some examples of neurotechnologies include **deep brain stimulation, photostimulation** based on optogenetics and photopharmacology, transcranial magnetic stimulation, and brain–computer interfaces, such as cochlear implants and retinal implants.
- **National Institute of Mental Health and Neuro Sciences (NIMHANS)**, located in Bangalore, Karnataka, is the apex centre for mental health and neuroscience education in the country and operates autonomously.

PIB June 10

E27 FUEL
(Syllabus: GS Paper 3 - Sci & Tech)

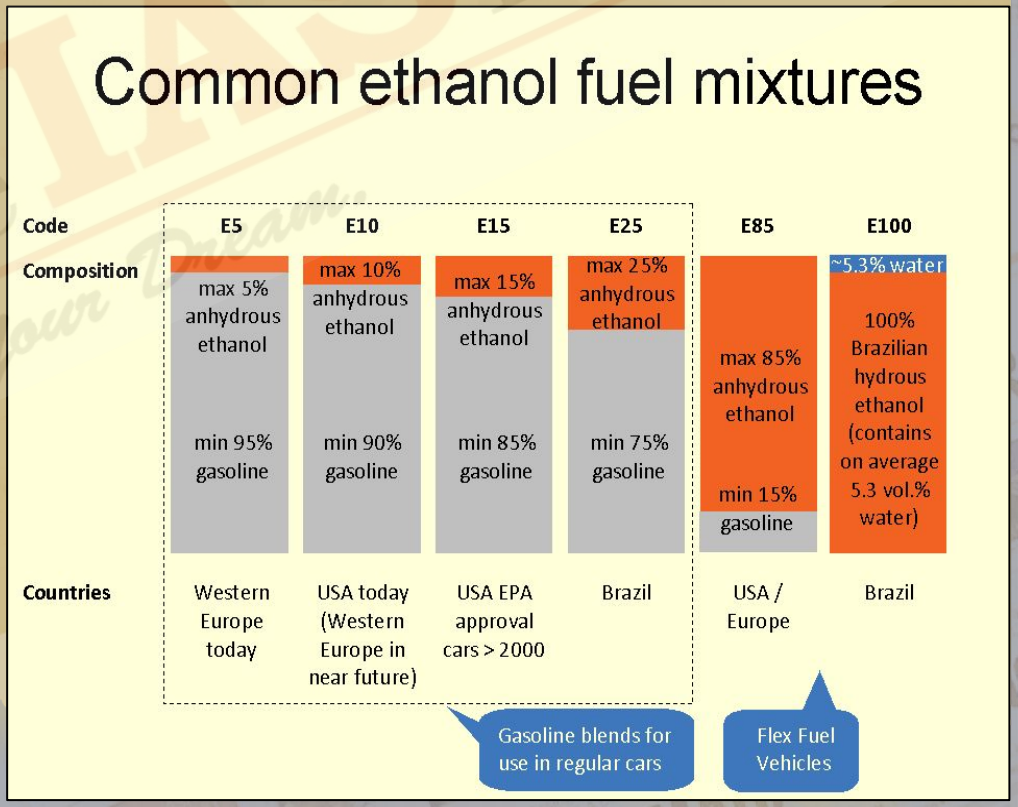
HPCL Undertakes Successful Pilot Study on E27 Fuel and Ethanol Blended Diesel Fuel

Context: Hindustan Petroleum Corporation Limited (HPCL) has successful launched groundbreaking pilot study on vehicles using **E27 fuel and Ethanol Blended Diesel Fuel.**

- Under the aegis of MoP&NG, HPCL has **become the first Oil Marketing Company** in India to initiate such a comprehensive research program, in line with the "Roadmap for Ethanol Blending in India by 2025," which aims to promote the adoption of Ethanol Blending in gasoline.

Key Points

- The roadmap outlines a phased rollout plan for achieving 20% **Ethanol Blended Gasoline (E20)** by April 2023 and ensuring its widespread availability by April 2025.
- It further emphasizes the introduction of **E20 material-compliant and E10 engine-tuned vehicles** starting from April 2023, followed by the production of E20-tuned engine vehicles from April 2025.
- The center's proficient team is evaluating the effects and performance of different **blends of ethanol-gasoline**, ranging from 10% to 27%, as well as various blends of ethanol-diesel, on different categories of test vehicles at the Engine Research laboratory.
- The pilot study of **E27 fuel will focus on assessing its performance and emissions** in engines and vehicles through extended mileage accumulation.
- India's next milestone in the Ethanol blending program is **achieving 27% Ethanol blending beyond E20 fuel.**
- With the success of the ongoing trials and the achievement of E27 fuel, India will proudly **stand side by side with Brazil** on the global platform in the Ethanol blending program.



DST

June 10

DIMETHYL ETHER FUEL

(Syllabus: GS Paper 3 - Sci & Tech)

Country's first Dimethyl Ether fuelled tractor ushers a new era of clean fuel applications

Context: India's first **100% Dimethyl Ether (DME) -fuelled tractor/ vehicle** for on- and off-road applications has been developed, initiating a new chapter in the crusade for a sustainable alternate fuel-based transport system.

- To bring the country up to speed in renewable energy sector, researchers at **IIT Kanpur developed a 100% DME-fuelled engine** with a mechanical fuel injection system.

Key Points

- DME is a suitable **alternative** since it is renewable.
- It can be **produced indigenously,** and several countries, like Japan, USA, China, Sweden, Denmark, and Korea, are already using DME to power their vehicles.
    - However, the use of DME in IC engines remains **uncharted territory in the Indian subcontinent.**
- The DME-fuelled engine emitted **extremely low particulate and soot emissions** and almost no smoke without using expensive exhaust gas after-treatment devices and advanced engine technologies, making it a viable alternative fuel and engine technology to adapt to conventional diesel engines used in our economy's agricultural and transport sectors.
- The DME-fuelled engine exhibited higher brake **thermal efficiency**. It produced **negligible soot** while significantly reducing HC, CO, and CO2 emissions.

INDIAN EXPRESS Page 1

EL NINO

(Syllabus: GS Paper 1 - Geography)

IN INDIA, KNOWN FOR SUPPRESSED RAINFALL DURING MONSOON

El Nino returns after 7 years, June arrival likely to impact second half of monsoon

Sudden gain in El Nino strength surpasses expectations, NOAA announces warming in the Pacific

ANJALI MARAR
BENGALURU, JUNE 9

AS THE monsoon hit the Kerala coast, the US National Oceanic and Atmospheric Administration (NOAA) declared that the equatorial Pacific Ocean was firmly in the El Nino phase.

Over India, the El Nino results in suppressed rainfall during the monsoon season.

El Nino, which in Spanish means little boy, refers to an abnormal warming of the sea surface waters in the equatorial Pacific Ocean that influences weather events globally.



In Kochi on Friday, a day after the IMD declared the arrival of the southwest monsoon in Kerala. *PTI*

"Depending on its strength, El Nino can cause a range of impacts such as increasing the risk of heavy rainfall and droughts in certain locations around the world," Michelle L'Heureux, climate scientist at the Climate Prediction Center, NOAA, said in a press statement.

The current El Nino event is the fifth since 2000. The sea surface waters in the Pacific Ocean alternate between a warm and cold phase every two to seven years, with a neutral phase thrown in between. This fluctuating system is called El Nino Southern Oscillation, or ENSO.

CONTINUED ON PAGE 6

EXPLAINED

The India experience

IN INDIA, there have been 18 drought years over 100 years. Of these, 13 years were associated with El Nino. Between 1900 and 1950, there were 7 El Nino years but in 1951-2021, there were 15 El Nino years. Of these, nine summer monsoon seasons recorded deficient rain.



Context: As the monsoon hit the Kerala coast, the US National Oceanic and Atmospheric Administration (NOAA) declared that the equatorial Pacific Ocean was firmly in the **El Nino phase.**

- Over India, the **El Nino results in suppressed rainfall** during the monsoon season.

El Nino

- **About**: It is the name given to the occasional development of warm ocean surface waters **along the coast of Ecuador and Peru.** El Niño events occur irregularly at intervals of 2–7 years, although the average is about once every 3-4 years.
  - After El Nino event weather conditions **usually return back to normal.**
  - However, in some years the trade winds can become extremely strong and an ab**normal accumulation of cold water** can occur in the central and eastern Pacific. This event is called a **La Niña.**
- **Impact on monsoon rainfall in across the globe**: El Nino **impacts ocean temperatures,** the speed and strength of ocean currents, the health of coastal fisheries, and local weather from Australia to South America and beyond.
  - **Rainfall increases drastically** in South America, contributing to coastal flooding and erosion.
- **Impacts on monsoon rainfall in India:** El Nino and Indian monsoons are **inversely related.**
  - The most **prominent droughts in India –** six of them – since 1871 have been El Nino droughts, including the recent ones in 2002 and 2009
  - However, **not all El Nino years led to a drought** in India. For instance, 1997/98 was a strong El Nino year but there was no drought (Because of IOD).
  - On the other hand, a **moderate El Nino in 2002** resulted in one of the worst droughts.
  - **El Nino directly impacts India's agrarian economy** as it tends to lower the production of summer crops such as rice, sugarcane, cotton, and oilseeds.

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