

SEPTEMBER

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TECHNOLOGY

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Kerala HC stays transfer of judge who made 'provocative dress' remark

EXPRESS NEWS SERVICE
THIRUVANANTHAPURAM,
SEPTEMBER 16

A DIVISION bench of Kerala high court on Friday, in an interim order, stayed the transfer of Kozhikode district sessions judge who had recently made a controversial observation in a sexual harassment offence would not stand if the woman was wearing a 'sexually provocative' dress.

The court acted upon a petition moved by the district judge, S Krishna Kumar, who had challenged a bench order upholding his transfer. Kumar had been transferred to Kollam labour court as the presiding officer after his controversial observations related to his two orders granting anticipatory bail to writer and social critic Civic Chandran in sexual harassment cases.

Kumar had said that the punitive action would hit the morale of judicial officers and the fear of punitive action would deter them from taking free and fair decisions on cases which come up for their consideration.

In his appeal before the division bench, the judicial officer had challenged the single bench stand that transfer norms are only guidelines and that it would not confer any right on the transferred employee. He said his transfer was not in the interest of the administration of justice.

The court has posted the matter to next week for further consideration, news agency PTI reported.

TRANSFER OF JUDGES

(Syllabus: GS Paper 2 - Polity & Governance)

Context: The Kerala High Court stayed the transfer of the Kozhikode district sessions judge, who had recently made a controversial observation that the sexual harassment offence would not stand when the woman was wearing "sexually provocative dresses".

Transfer of judges

- Article 222 of the Constitution provides for the transfer of High Court judges, including the Chief Justice.
- It says the President, after consultation with the Chief Justice of India, may transfer a judge from one High Court to any other High Court.
- It also provides for a compensatory allowance to the transferred judge.
- This means that the executive could transfer a judge, but only after consulting the Chief Justice of India. From time to time, there have been proposals that one-third of the composition of every High Court should have judges from other States.

Current procedure for transfers

- In the collegium system, the proposal for transferring a High Court judge, including a Chief Justice, should be initiated by the Chief Justice of India, "whose opinion in this regard is determinative".
- The consent of the judge is not required.
- All transfers are to be made in public interest, i.e., for promoting better administration of justice throughout the country.
- For transferring a judge other than the Chief Justice, the Chief Justice of India should take the views of the Chief Justice of the court concerned, as well as the Chief Justice of the court to which the transfer is taking place.
- The Chief Justice of India should also take into account the views of one or more Supreme Court judges who are in a position to offer their views in the process of deciding whether a proposed transfer should take place.
- In the case of transfer of a Chief Justice, only the views of one or more knowledgeable Supreme Court judges need to be taken into account.
- The views should all be expressed in writing, and they should be considered by the Chief Justice of India and four senior-most judges of the Supreme Court, which means, the full Collegium of five.
- The recommendation is sent to the Union Law Minister who should submit the relevant papers to the Prime Minister.
- The Prime Minister then advises the President on approving the transfer.

In Telangana today, same event, 2 celebrations

SREENIVAS JANYALA
HYDERABAD, SEPTEMBER 16

TO MARK 75 years of the merger of the princely state of Hyderabad with the Indian Union, the central and state governments will hoist national flags at separate events in Telangana on Saturday.

Union Home Minister Amit Shah will unfurl the flag at 8.45 am at the Parade Ground in Secunderabad to celebrate 'Hyderabad State Liberation Day', while Chief Minister K Chandrasekhara Reddy will hoist the Tricolour at 10.30 am in Public Gardens in Hyderabad as part of 'Telangana National Unity Day' celebrations.

The history of union

When India became independent on August 15, 1947, it was still struggling to bring the 500-odd princely states dotting its territory into the union. Among the states that had not acceded to the union was Hyderabad, leading Sardar Vallabhbhai Patel to famously

note that an independent Hyderabad would constitute a "cancer in the belly of India".

In the 1940s, a strong peasant movement, led by the communists, had started against the government of the Nizam. When discussions about accession to India started, the Nizam and the nobility were in favour of an independent Hyderabad, but the majority of the population, including peasant protesters, wanted to join the Union of India.

The Nizam used a paramilitary force called the Razakars to terrorise and suppress the peasantry, and to lead the armed resistance against joining the Union. The Razakars plundered villages and killed indiscriminately to crush the demand for merger with India, including 96 villagers in Bhairanapally on August 27, 1948.

On September 17, 1948, the Indian Army entered the princely state, which consisted of modern-day Telangana and some areas of Maharashtra and Karnataka, as part of Operation Polo. In less than a week, the Nizam and the Razakar squads surrendered.

The political context

With the Assembly polls in the state scheduled for next year, the BJP is seeking to turn the anniversary of the historic occasion into an opportunity to score political points against the TRS and its ally, the All India Majlis-e-Ittehadul Muslimeen (AIMIM) led by Hyderabad MP Asaduddin Owaisi. It has attacked the ruling party for not observing the occasion in the eight years it has been in power, and has sought to link it to the TRS's alleged "reluctance" to upset Owaisi.

The Razakars had links with an outfit called the Majlis-e-Ittehad-ul-Muslimeen, or MIM. The Owaisi-led party says that this original Majlis ceased to exist after September 17, 1948. According to historian Mohammed Nooruddin Khan, the president of the MIM, Kasim Razvi, and other senior leaders of the outfit left for Pakistan after handing over the reins of their party to Abdul Wahed Owaisi, who was the grandfather of Asaduddin Owaisi. Abdul Wahed Owaisi had not been associated with the outfit before that, says Mohammed Nooruddin Khan.

BJP national general secretary Tanuj Chugh has claimed that the TRS was forced to announce plans to observe 'Telangana National Unity Day' after the Centre said that it would commemorate the 'Day of Liberation'.

While Maharashtra and Karnataka already commemorate this day as Marathwada Liberation Day and Hyderabad-Karnataka Liberation Day (some areas in the two states fell under the Hyderabad princely state) respectively, the Centre aims to celebrate the day across the three states.

"It is only after the Centre's announcement that the state government decided to celebrate it. Not only the TRS, the Congress and the AIMIM have also been forced to acknowledge it. It is the BJP that has been demanding for many years that this event should be celebrated as Telangana liberation day," state BJP chief Bandi Sanjay Kumar said earlier this month.

EXPLAINEDBOOKS
WILL RETURN NEXT SATURDAY



HYDERABAD LIBERATION DAY (Syllabus: GS Paper 1 - History)

Context: The central and state governments will hoist national flags at separate events in Telangana.

Hyderabad-Karnataka Liberation Day

- Hyderabad-Karnataka Liberation Day, officially known as, Kalyana-Karnataka Liberation Day (Vimochana Diwas is an annual festival celebrated in seven districts like Bidar district, Kalaburagi district, Yadgir district, Raichur district, Ballari district & Koppal district, Vijayanagara district of Karnataka state, India.
- It takes place on 17 September.
- The festival celebrates the annexation of Hyderabad by India in 1948 following the Partition of India and rebellions in Hyderabad State.
- The erstwhile princely state of Hyderabad - which covered the modern-day Marathwada region in Maharashtra, the Hyderabad-Karnataka region in Karnataka, and all districts in current-day Telangana - became part of the Union of India on September 17, 1948.
- At the time of Partition in 1947, the wealthiest and most powerful principality, Hyderabad, where the Nizam, Mir Osman Ali Khan, Asaf Jah VII, a Muslim ruler who presided over a largely Hindu population, chose independence and hoped to maintain this with an irregular army.
- Fearing the establishment of a Communist state in Hyderabad by the rebels and the rise of Muslim nationalist Razakar militias, India defeated the Razakars and took the state in September 1948 following a crippling economic blockade.
- Subsequently, the Nizam signed an instrument of accession, joining India.
- Operation Polo was the codename for the police action against the Princely State of Hyderabad in September 1948 by the newly Independent republic of India.
- The operation led to massive violence on communal lines, at times perpetrated by the Indian Army.
- Since then, locals commemorate the day as a regional Independence Day.
- In 2022, Government of Telangana decided to celebrate this day as Telangana National Integration Day.

India eyes alliance of biofuel producers

FROM PAGE 16

produced from various types of non-food biomass, such as plant materials and animal waste. The 3G biofuels are produced from microorganisms such as bacteria and algae.

"We are not looking at importing or exporting. We are just talking about an alliance of like-minded countries to see the knowledge exchange and research and development, and then, we can see (if trade can take place). That's a major priority as biofuel is an emerging fuel for future," the official said.

In 2018, the Centre restricted the import and export of biofuels to increase domestic capacity.

The Centre also aims to have bilateral agreements for development of biofuels, the official said. India is eyeing the US, apart from Brazil and others, for bilateral coordination, the official said.

In April, India and Brazil agreed on the importance of



The alliance would initially focus on knowledge sharing and transfer of technology on producing biofuel. **BLOOMBERG**

strengthening bilateral cooperation in bioenergy and work towards developing an India-Brazil alliance for bioenergy and biofuels, during Brazilian mines and energy minister Bento Albuquerque's visit to the country.

The plan comes at a time India is eyeing energy security as the world stares at an energy crisis amid the Russia-Ukraine conflict. The crisis may impact India severely as the country

meets around 85% of its energy requirement through imports.

The move to build an alliance of biofuel producers is planned to secure energy security for oil importing countries, given the dominance of Opec and its allies, including Russia, together known as 'Opec+', over the global crude oil market.

Amid concerns of a global energy crisis, Opec+ recently decided to lower its daily production level by 100,000 barrels per day for October, which resulted in a brief spike in prices. India has repeatedly asked Opec and its member countries to raise production, keeping in view the requirement of oil-consuming nations.

India also has an ambitious biofuel road map under its national biofuel policy. The government has set a target to achieve 20% ethanol blending in petrol by 2025-26. The initial deadline to achieve 20% blending was 2030. The target of petrol supplies with 10% eth-

anol blending was achieved in June, ahead of the original schedule of November.

Launched in 2018 with a thrust on advanced biofuels, the policy envisages a ₹5,000 crore viability gap funding scheme for 2G ethanol bio-refineries in six years, besides tax incentives and a higher purchase price as compared to 1G biofuels. The policy encourages building supply chain mechanisms for biodiesel production from non-edible oilseeds, used cooking oil and short-gestation crops. If an alliance is indeed formed, it would help India develop its biofuel space which is at a nascent stage, said Prashant Vashisht, vice-president, ICRA. "Beyond ethanol, there has not been much progress in terms of volumes in India. These are evolving in terms of technology," he said.

Queries sent to the ministry of petroleum and natural gas, ministry of external affairs, and the ministry of finance remained unanswered till press time.

Context: India is planning to forge an alliance of biofuel-producing countries to counter the Organization of Petroleum Exporting Countries (OPEC).

Biofuels

- The term biofuels usually applies to liquid fuels and blending components produced from biomass materials called feedstocks.
- Unlike other renewable energy sources, biomass can be converted directly into liquid fuels, called "biofuels," to help meet transportation fuel needs.
- The fuel derived from the biomass of plants or animal wastes is known as biofuel.
- It is commonly produced from corn, sugarcane and animal waste like cow dung.
- Since these sources are renewable unlike fossil fuels, it comes under renewable sources of energy.
- The two most common biofuels are ethanol and biodiesel.
- The ethanol is produced by fermentation of residues of crops like corn and sugarcane.
- The ethanol after fermentation is mixed with petroleum, which dilutes the latter and reduces the emissions.
- Ethanol-10 or E10 is the most common blend in which 10 per cent composition is Ethanol.
- On the other hand, Biodiesel is produced from used cooking oil, yellow grease or animal fats.
- During its production, cooking oil or fat is burned with alcohol in presence of a catalyst, which produces Biodiesel.
- The Indian government approved the "National Policy on Biofuel" in 2018 which aims at 20 percent of ethanol-blending and five percent of biodiesel blending by 2030.
- It also aims at promoting the production of biofuels under the "Make in India" program. The biofuels were also included in the excise duty exemption to promote their production.

National Policy on Biofuels 2018

Salient features



An indicative target of **20% blending** of ethanol in petrol and **5% blending** of biodiesel in diesel is proposed by 2030.



With a thrust on **Advanced Biofuels**, the Policy indicates a viability gap funding scheme for **2G ethanol Bio refineries** of **Rs.5000 crore in 6 years** in addition to additional tax incentives, higher purchase price as compared to **1G biofuels**.



Categorization of Biofuels into **Basic Biofuels** - First generation (1G) Bioethanol & biodiesel and "**Advanced Biofuels**"- Second Generation (2G) ethanol, drop-in fuels, **algae based** Third Generation (3G) Biofuels.



Increase scope of raw material for ethanol procurement by encouraging Intermediate (**B-Molasses**), Sugarcane Juice, other Sugar containing materials and damaged as well as surplus food grains.



Develop **National Biomass repository** by conducting appraisal of biomass across the Country.



Bio diesel production to be encouraged from non edible oilseeds, **used cooking oil**, short gestation crops and development of supply chain mechanisms.



Thrust on **research, development and demonstration** in the field of **Biofuel feedstock** production, advanced conversion technologies from identified feedstock.



Setting up of **National Biofuel coordination committee (NBCC)** under **Ministry of Petroleum & Natural Gas** and Working Group on Biofuels.

Vi won't convert dues to govt equity

Staff writer

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NEW DELHI

Vodafone Idea has decided against converting the accrued interest on its deferred adjusted gross revenue (AGR) dues of ₹8,837 crore for FY18 and FY19 into equity that was to be held by the Union government, said two people in the know, seeking anonymity.

The telecom operator had to decide on the equity conversion for FY18-19 by 15 September. The Centre provided telcos with an option to take a four-year moratorium (FY22 to FY25) for dues till FY19, that could

be converted to equity. In June, Vi opted to take the four-year moratorium for paying additional dues of ₹16,000 crore till 2016-17 and converting to 33% equity, which will be owned by the Centre. It is awaiting approval from the Department of Telecommunications (DoT).

The Centre's move was part of a relief package announced

in September 2021, for AGR dues till FY17.

The scheme was extended to all carriers to help improve the financial health of the sector, battered by high debt and low tariffs.

Once the DoT approves the conversion of AGR dues of up to FY17 for Vi, the government will become the single-largest shareholder with a 33% stake, while promoter shareholding in Vi will fall to 50% from the near 75% currently.

Vi had to decide on converting the accrued interest on its deferred AGR dues of ₹8,837 crore for FY18 and 19

Officials said the Centre was waiting for Vi's share price to settle above the ₹10 mark before proceeding with the conversion as it will be done at a par value.

If Vi had opted for conversion of the additional interest to equity as well, the Centre's stake would have risen beyond 33%. In a note, researcher CLSA warned on Thursday that the government's share in Vi may rise to 88% after FY26 if the company fails to make the annual payments of about \$5 billion and the government decides to convert its debt into equity.

ADJUSTED GROSS REVENUE (AGR)

(Syllabus: GS Paper 3 - Economy)

Context: Vodafone Idea has decided against converting the accrued interest on its deferred adjusted gross revenue (AGR) dues.

Adjusted gross revenue (AGR)

- Telecom operators are required to pay licence fee and spectrum charges in the form of 'revenue share' to the Centre.
- The revenue amount used to calculate this revenue share is termed as the AGR.
- According to the Department of Telecommunications' (DoT), the calculations should incorporate all revenues earned by a telecom company - including from non-telecom sources such as deposit interests and sale of assets.
- The companies have been of the view that AGR should comprise the revenues generated from telecom services only and non-telecom revenues should be kept out of it.
- In 2021, the DoT introduced the concept of the applicable gross revenue (ApGR), which is arrived at by removing all the non-telecom revenues earned by telcos from their gross revenue (GR).
- The DoT has removed several non-telecom income items, such as those from property rents, dividends and interests, from the calculation of adjusted gross revenue (AGR).
- Gains from forex fluctuations, insurance claims, capital gains on account of sale of fixed assets and securities, receipts from Universal Service Obligation Fund, bad debts recovered, excess provisions written back, revenue from activities under the I&B licence and revenue from operations other than telecom activities will now be excluded from gross revenue to arrive at the ApGR.

2005: Govt.'s definition of Adjusted Gross Revenue (AGR) calculation challenged by firms. Govt. says AGR includes all revenues while companies argue that it includes only revenue from core services

2015: Telecom Disputes Settlement and Appellate Tribunal rules that the companies' definition is right

Oct. 24, 2019: SC sets aside the tribunal's judgment saying govt.'s definition is right. Orders telecom firms to pay ₹1.47 lakh crore

Feb. 14, 2020: SC threatens telecom firms with contempt proceedings, slams officials for failing to enforce ruling



SC seeks Centre's reply on issue of marital rape

It seeks govt. stand on criminalisation

KRISHNADAS RAJAGOPAL
NEW DELHI

The Supreme Court on Friday sought a response from the government on appeals to criminalise marital rape.

A Bench led by Justice Ajay Rastogi indicated that several similar petitions were pending in the court and they would be listed together for hearing in February next year.

The appeals follow a split decision from the Delhi High Court on whether or not to prosecute husbands for non-consensual sex with their wives.

During the brief hearing, the All India Democratic Women's Association, represented by advocate Karuna Nundy, said both judges in the Bench in the Delhi High Court had agreed that the case raised a substantial question of law which required an authoritative ruling from the Supreme Court.

The issue focuses on the exception in rape law in the Indian Penal Code which dismisses the idea of rape within marriage. The ques-

tions raised include whether or not a married woman has bodily autonomy. In short, whether a husband should accept that his wife's "no means no", and any transgression would amount to rape.

Justice Rajeev Shakdher, the lead judge on the Delhi High Court Bench which delivered a split opinion in May, had favoured striking down the marital rape exception for being "unconstitutional".

He had said it would be "tragic if a married woman's call for justice is not heard even after 162 years" since the enactment of the Indian Penal Code (IPC).

Justice C. Hari Shankar, the other judge on the Bench, had however disagreed and said the exception under the rape law was based on an "intelligible differentia".

The petitioners had challenged the constitutionality of the marital rape exception under Section 375 (rape) of the IPC on grounds that it discriminated against married women.

Context: The Supreme Court sought a response from the government on appeals to criminalise marital rape.

Marital rape in India

- In India, there are no legal provisions that define "marital rape".
- Section 375 of the IPC defines the acts that constitute rape by a man.
 - o The provision lays down two exceptions as well.
 - o Apart from decriminalising marital rape, it mentions that medical procedures or interventions shall not constitute rape.
- Section 375 states that "sexual intercourse or sexual acts by a man with his own wife, the wife not being under fifteen years of age, is not rape".
- The Domestic Violence Act, 2005 hints at marital rape by any form of sexual abuse in a live-in or marriage relationship.
 - o It only provides for civil remedies.
 - o There is no way for marital rape victims in India to initiate criminal proceedings against their perpetrator.
- The IPC was implemented in India during British colonial rule in 1860.
 - o Under the first version of the rules, the marital rape exception was applicable to women over ten years of age.
 - o In 1940, this age was raised to 15.
 - o In October 2017, the Supreme Court ruled that sexual intercourse by a man with his wife, the wife not being under eighteen years of age, is not rape.
- **Doctrine of Hale:** It states that a husband cannot be guilty of rape, since "by their mutual matrimonial consent and contract the wife has given up herself in this kind to the husband".
- **Doctrine of Coverture:** This doctrine, although not recognised by the Constitution, holds that a woman loses her identity and legal rights with marriage, is violative of her fundamental rights.

IAF to fly AN-32 on blended biodiesel for 200 hours

Performance very satisfactory, says Air Vice-Marshall

DINAKAR PERI
NEW DELHI

As part of efforts to reduce its carbon footprint, the Indian Air Force (IAF) is looking to fly an AN-32 transport aircraft modified to operate on 10% blended biodiesel for 200 flight hours in the next six months, Air Vice Marshall S. K. Jain, Assistant Chief of the Air Force (Maintenance Plans), said on Friday.

The aircraft took flight on biodiesel blended with aviation turbine fuel (ATF) for the first time in December 2018. "So far, an AN-32 has flown 65 hours with a 10% blend of biofuel and the performance has been very sa-



Going green: An AN-32 took flight on blended biodiesel for the first time in 2018.

tisfactory," he said at a seminar on sustainable aviation biofuels organised by the Aeronautical Society of India.

A second aircraft, a Dornier, was now undergoing

ground tests after it had been cleared by the original manufacturer of the engine, Honeywell, for use of 50% biofuel, he said.

The global aviation industry is one of the biggest emitter of greenhouse gases that cause global warming. The fuel consumption of the IAF for 2021-22 was 6.2 lakh kilolitres, which contributed 15 lakh tonnes of carbon dioxide.

On the civil aviation front, an official from aircraft manufacturer Airbus said it had plans to offer 100% sustainable aviation fuel (SAF) compatibility on its commercial aircraft latest by 2030.

AN-32 AIRCRAFT (Syllabus: GS Paper 3 - Sci & Tech)

Context: The Indian Air Force (IAF) is looking to fly an AN-32 transport aircraft modified to operate on 10% blended biodiesel for 200 flight hours in the next six months.

AN-32 aircraft

- The AN-32 prototype took its maiden flight in July 1976. A Russian aircraft, it is considered to be one of the most reliable machines the IAF has in its inventory.
- The AN-32 weighs around 16,800 kg and its maximum take-off weight is 27,000 kg.
- They can fly at a maximum speed of 530 kmph.
- The aircraft can either transport 6.7 tonnes of cargo or up to fifty passengers, but is primarily used to ferry cargo, especially for mountainous and desert regions.
- It also has an emergency beacon locator, which usually gets activated if there is a crash.
- The twin-engine aircraft has the ability to take off and land from small airstrips, and is designed to be used in both civilian and military situations.
- According to aircraft manufacturer Antonov, the aircraft is fitted with modern cargo handling devices.
- It has a cargo door with a ramp at the rear section of the fuselage. The ramp can be shifted under the fuselage for quick loading and unloading.
- The aircraft flight navigation system and radio communication equipment enables performance of flights under adverse weather conditions, during the day and night, for local and international air routes.
- Nearly 100 AN-32s are in service with the IAF.
- The aircraft can fly for up to four hours without refuelling and can also operate in all weather conditions.
- There are 10 variants of the AN-32: An-32A, An-32B, An-32B-100, An-32B-110, An-32B-120, An-32B-300, An-32LL, An-32MP, An-32P firekiller and An-32B-200.

Kazakh capital back to being called Astana

Almaty: Kazakhstan's parliament renamed the Central Asian nation's capital from Nur-Sultan to Astana on Friday, the latest move by government officials and politicians to distance themselves from the former Soviet republic's first president. The city became the capital in 1997. It was renamed Astana the following year. Nursultan Nazarbayev, Kazakhstan's president at the time, said he wanted the capital to be located closer to the geographical centre of the vast nation. In 2019, when Nazarbayev resigned after 3 decades in power, his successor Kassym-Jomart Tokayev renamed Astana to Nur-Sultan in honour of the ex-leader. Tokayev, however, appeared to have a falling out with Nazarbayev after violent protests over fuel prices in January. On Friday, the parliament voted to revert to the name Astana by changing the constitution. REUTERS

KAZAKHSTAN'S CAPITAL: ASTANA

(Syllabus: GS Paper 1 - Geography)

Context: Kazakhstan's parliament renamed the Central Asian nation's capital from NurSultan to Astana.

Astana

- The city became the capital in 1997.
- It was renamed Astana the following year.
- Nursultan Nazarbayev, Kazakhstan's president at the time, wanted the capital to be located closer to the geographical centre of the vast nation.
- In 2019, when Nazarbayev resigned after 3 decades in power, his successor Kassym-Jomart Tokayev renamed Astana to Nur-Sultan in honour of the ex-leader.

Kazakhstan

- Kazakhstan, officially the Republic of Kazakhstan, is a transcontinental landlocked country located mainly in Central Asia and partly in Eastern Europe.
- It borders Russia to the north and west, China to the east, Kyrgyzstan to the southeast, Uzbekistan to the south, and Turkmenistan to the southwest.
- Its capital is Astana, known as Nur-Sultan from 2019 to 2022.
- Almaty, Kazakhstan's largest city, was the country's capital until 1997.
- Kazakhstan is the world's largest landlocked country, the world's largest Muslim-majority country by land area (and the northernmost), and the ninth-largest country in the world overall.



ENVIRONMENT

World Ozone Day: Forest fires pose new threat to ozone layer

Study finds black carbon due to frequent, widespread wildfires may be widening the ozone hole

By DTE Staff

Published: Friday 16 September 2022



Ozone Layer depletion

- Chemicals containing chlorine and bromine atoms are released in the atmosphere through human activities.
 - These chemicals combine with certain weather conditions to cause reactions in the Ozone Layer, leading to ozone molecules getting destroyed.
- Depletion of the Ozone Layer occurs globally, but the severe depletion of the Ozone Layer over the Antarctic is often referred to as the 'Ozone Hole'.
- Increased depletion has recently started occurring over the Arctic as well.

Montreal Protocol on Ozone Layer depletion

- The Montreal Protocol, finalized in 1987, is a global agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances (ODS).

Context: Forest fires in Australia continued from June 2019 to March 2020, and released over 1 million tonnes of smoke that reached to the stratosphere and affected the ozone layer.

Key points

- The smoke plumes formed several vortices, the largest of which maintained a coherent and isolated structure for over two months and was eventually detected at altitudes of up to 36 km.
- The smoke plumes rose to such great heights because of black carbon, which absorbs solar heat and rises into the lower stratosphere like a hot-air balloon.
- The ozone layer sits in the stratosphere, located between 10 km and 50 km above Earth's surface, and absorbs harmful ultraviolet radiation from the sun.
- Research has linked a decrease in ozone levels to an uptick in the incidence of skin cancer and cataracts in humans.

World Ozone Day

- World Ozone Day, also known as the International Day for the Preservation of the Ozone Layer, is observed annually on September 16 to bring attention to the ozone layer and the dangers of ozone depletion.

Ozone layer

- The ozone layer is the part of the Earth's atmosphere which contains relatively high concentrations of ozone gas, which is an inorganic molecule with the chemical formula O_3 .
- Ozone is a pale blue gas with a pungent (chlorine-like) smell.
- Though relatively high, the concentration in this layer is still small in comparison to other gases in the stratosphere.
- The Ozone layer absorbs most of the ultraviolet radiation reaching the earth from the sun.
- Ozone Layer in the atmosphere is thicker over the poles than over the equator.
- When the sun's rays split oxygen molecules into single atoms, Ozone is created in the atmosphere.
 - These single atoms combine with nearby oxygen to form a three-oxygen molecule - Ozone.
- **Ozone can both protect and harm the Earth** - it all depends on where it resides.
 - For instance, if Ozone is present in the stratosphere of the atmosphere, it will act as a shield.
 - However, if it is in the troposphere (about 10 km from the Earth's surface), Ozone is harmful.
 - It is a pollutant that can cause damage to lung tissues and plants. Hence, an upset in the ozone balance can have serious consequences.

Varanasi nominated as the first-ever SCO Tourism and Cultural Capital at the 2022 SCO Summit

Posted On: 16 SEP 2022 11:07PM by PIB Delhi

Context: The city of Varanasi has been nominated as the first-ever SCO Tourism and Cultural Capital during the period 2022-2023 at the 22nd Meeting of Shanghai Cooperation Organization (SCO) Council of Heads of State in Samarkand, Uzbekistan.

Key points

- The nomination of Varanasi as the first ever SCO Tourism and Cultural Capital will promote tourism, cultural and humanitarian exchanges between India and the SCO member Countries.
- It also underlines India's ancient civilizational links with Member States of SCO, especially the Central Asian Republics.
- Under the framework of this major cultural outreach program, a number of events will be hosted in Varanasi during 2022-23, for which guests will be invited to participate from SCO Member States.
- These events are expected to attract Indologists, scholars, authors, musicians and artists, photojournalists, travel bloggers and other invited guests.

SCO Tourism and Cultural Capital

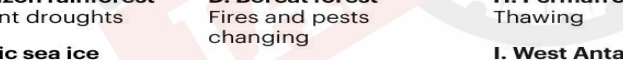
- The regulations for nomination of the SCO Tourism and Cultural Capital were adopted at the Dushanbe SCO Summit in 2021 with an objective of promoting cooperation between the SCO Member States in the field of culture and tourism.
- Every year, a city having cultural heritage from the member country that takes over the rotating Presidency of the organization will be bestowed with the title.
- The title will help in promoting the cultural values of the city and add to values- economic, social, and more.
- People-to-people cooperation is an important area under the SCO framework and member states are very proactive and positive and implemented a large number of cooperation in cultures.

Press Release



Evidence that tipping points are under way has mounted in the past decade. Domino effects have also been proposed.



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- | | | |
|---|--|--|
| A. Amazon rainforest
Frequent droughts | D. Boreal forest
Fires and pests changing | H. Permafrost
Thawing |
| B. Arctic sea ice
Reduction in area | F. Coral reefs
Large-scale die-offs | I. West Antarctic ice sheet
Ice loss accelerating |
| C. Atlantic circulation
In slowdown since 1950s | G. Greenland ice sheet
Ice loss accelerating | J. Wilkes Basin, East Antarctica
Ice loss accelerating |

Key points

- ## Tipping points in the climate system

- In climate science, a tipping point is a critical threshold that, when crossed, leads to large and often irreversible changes in the climate system.
- If tipping points are crossed, they are likely to have severe impacts on human society.
- The sixth report from the United Nations Intergovernmental Panel on Climate Change (IPCC), released in 2021, defines a tipping point as a "critical threshold beyond which a system reorganizes, often abruptly and/or irreversibly".
- It can be brought about by a small disturbance causing a disproportionately large change in the system. One set of definitions of "tipping points" also requires self-reinforcing feedbacks, which could lead to changes in the climate system irreversible on a human timescale.
- For any particular climate component, the shift from one state to a new stable state may take many decades or centuries.
- In ecosystems and in social systems, a tipping point can trigger a regime shift, a major systems reorganisation into a new stable state.
- The 2019 IPCC Special Report on the Ocean and Cryosphere in a Changing Climate defines a tipping point as: "A level of change in system properties beyond which a system reorganises, often in a non-linear manner, and does not return to the initial state even if the drivers of the change are abated. For the climate system, the term refers to a critical threshold at which global or regional climate changes from one stable state to another stable state."

THANK YOU!



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