



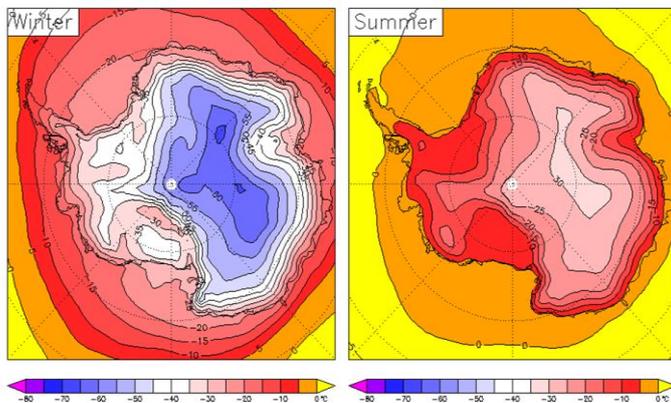
10 August, 2024

Antarctica's Winter Heatwave

Context: For the second time in two years, Antarctica is experiencing a record-breaking heatwave during its peak winter season.

➤ Current Situation

- **Record-Breaking Heatwave:** Antarctica is experiencing a record-breaking heatwave during its peak winter season.
- **Temperature Increases:** Ground temperatures have been 10°C higher than average since mid-July, with some days seeing increases of up to 28°C.
- **East Antarctica Temperatures:** In parts of East Antarctica, temperatures are currently between -25°C and -30°C, whereas deep-winter temperatures typically range from -50°C to -60°C.



➤ Causes of the Heatwave

- **Weakening of the Polar Vortex:** The polar vortex, a band of cold air and low pressure systems that usually keeps cold air trapped over Antarctica, has weakened. This disruption is due to large-scale atmospheric waves.
- **Warm Air Infiltration:** The weakened vortex allowed warmer air to enter the region, raising temperatures as this warmer air descended from the upper atmosphere.
- **Frequency of Vortex Weakening:** A weakened southern hemisphere vortex is rare, expected to occur about once every two decades.

➤ Contributing Factors

- **Antarctic Sea Ice Reduction:** The extent of Antarctic sea ice was the second-lowest ever for June, following the record low of June 2023. Reduced sea ice diminishes the reflective surface that keeps temperatures down and removes a barrier between cold air and warmer water.
- **Global Warming Impact:** Antarctica is warming at a rate of 0.22°C to 0.32°C per decade, nearly twice the global average rate of 0.14°C to 0.18°C per decade.

➤ Potential Consequences

- **Loss of Antarctic Ice Sheet:** Continued warming could accelerate the loss of the Antarctic Ice Sheet, which could raise global sea levels by hundreds of feet. The continent has already lost 280% more ice mass in the 2000s and 2010s compared to the 1980s and 1990s.
- **Historical Heatwave Effects:** In March 2022, a heatwave caused temperatures in East Antarctica to rise 39°C above normal, resulting in a portion of the ice sheet the size of Rome collapsing.
- **Impact on Sea Levels:** The Antarctic Ice Sheet, which contains over 60% of the world's freshwater, has the potential to submerge coastal cities if fully melted. A sea level rise of a few feet could displace about 230 million people living near the high tide line.
- **Disruption to Global Ocean Circulation:** Melting ice in Antarctica is slowing global ocean circulation, which regulates climate by transporting heat, carbon, nutrients, and freshwater. The reduction in salinity and density from melting ice impairs the downward flow to the ocean's bottom.

Privilege Motion

Context: The Congress requested privilege proceedings in the Rajya Sabha against Union Education Minister Dharmendra Pradhan for allegedly misleading the house about removing the Preamble from NCERT textbooks.

➤ About Privilege Motion

- **Rights and Immunities:** MPs have rights and immunities to effectively perform their duties. Disregard of these rights by a member is considered a breach of privilege and is punishable under parliamentary laws.
- **Constitutional Privileges:** Article 105 of the Constitution provides two main privileges: freedom of speech in Parliament and the right to publish its proceedings.
- **Additional Privileges:** The Code of Civil Procedure, 1908, offers additional protections, including freedom from arrest and detention under civil process during and around parliamentary sessions.

➤ Parliamentary Privilege

- **Definition:** Parliamentary privilege refers to the special rights and immunities granted to Parliament and its members to perform their duties effectively.
- **Purpose:** It aims to protect the freedom, authority, and dignity of Parliament.
- **Individual Use:** Privileges are available to members only as needed for Parliament to function freely.

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10 August, 2024

- **Legal Standing:** MPs do not have different legal standing from ordinary citizens unless necessary for Parliament's operations.

- **Key Privileges:**

- **Freedom of Speech:** MPs can speak freely in Parliament without legal consequences.
- **Immunity from Court Proceedings:** MPs are protected from being sued for anything said or voted on in Parliament or its committees.
- **Publication Immunity:** Protection from legal action regarding the publication of parliamentary reports and proceedings.
- **Freedom from Civil Arrest:** MPs cannot be arrested in civil cases during sessions and for forty days before and after sessions. Freedom from arrest does not cover preventive arrests or criminal cases.

➤ **Applicability**

- **Who Is Covered:** Parliamentary privileges extend to individuals entitled to speak and participate in parliamentary proceedings, including the Attorney General of India.
- **Exclusions:** The President, although part of Parliament, does not fall under parliamentary privileges but is covered by Article 361 for separate privileges.

➤ **Role of Lok Sabha Speaker and Rajya Sabha Chairperson**

- **Initial Scrutiny:** The Speaker of Lok Sabha and the Chairperson of Rajya Sabha are responsible for the initial review of a privilege motion.
- **Decision-Making:** They can either decide on the motion themselves or refer it to the privileges committee.
- **Member Explanation:** With consent under Rule 222, the concerned member may explain their position.

➤ **Rules Governing Privilege**

- **Rule References:** Privilege is governed by Rule 222 in the Lok Sabha Rule Book and Rule 187 in the Rajya Sabha Rule Book.
- **Procedure:** Members may raise privilege questions with the Speaker's or Chairperson's consent, addressing breaches of privilege concerning the member, House, or a committee.

➤ **Privilege Committee**

- **Composition:** The Lok Sabha committee consists of 15 members from each party, while the Rajya Sabha committee has 10 members.
- **Debate and Reporting:** The Speaker may permit a half-hour debate on the committee's report before making final orders or tabling the report before the House.

Pradhan Mantri JI-VAN Yojana

Context: The Cabinet approved an amendment to the "Pradhan Mantri JI-VAN Yojana" to provide financial support for advanced biofuel projects using lignocellulosic biomass and other renewable feedstocks.

➤ **Scheme Modification**

- **Extended Timeline:** The implementation period for the Pradhan Mantri JI-VAN Yojana has been extended by five years, until 2028-29.
- **Scope Expansion:** The scheme now includes advanced biofuels from lignocellulosic feedstocks such as agricultural and forestry residues, industrial waste, synthesis gas, and algae.
- **Eligibility Updates:** "Bolt-on" plants and "Brownfield projects" can now participate, leveraging their experience to improve viability.
- **Preference for Innovation:** Preference will be given to proposals featuring new technologies and innovations.

➤ **Scheme Objectives**

- **Farmer Income:** Provide remunerative income for agricultural residues.
- **Environmental Impact:** Address environmental pollution and support the Swaccha Bharat Mission by managing waste biomass and urban waste.
- **Employment:** Create local employment opportunities in rural and urban areas.
- **Energy Security:** Contribute to India's energy security and self-reliance, supporting the Make in India Mission.
- **GHG Emissions:** Assist in achieving India's net-zero GHG emissions target by 2070.

➤ **Background**

- **Ethanol Blending:** The ethanol blending percentage in petrol increased from 1.53% in 2013-14 to 15.83% in July 2024, with a cumulative percentage exceeding 13% in the ongoing Ethanol Supply Year (ESY) 2023-24.
- **Blending Targets:** The Government aims for 20% blending by ESY 2025-26, requiring over 1100 crore liters of ethanol and 1750 crore liters of distillation capacity.
- **Focus on 2G Ethanol:** The Government is promoting 2nd Generation (2G) ethanol from surplus biomass and agricultural waste.

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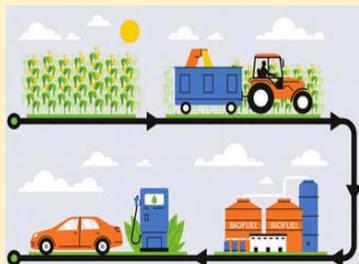
| Generation | Characteristics | Remarks |
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| First | Produced from food crops (maize, corn, sugar cane, rapeseed, palm, soybean) into ethanol and biodiesel using processes similar to beer and wine-making. | Impacts food security by diverting staple crops for fuel, raising food prices and causing a conflict between fuel and food security. |
| Second | Produced from non-food crops and organic agricultural waste containing cellulose, such as switchgrass, Jatropha, and castor seed. | Utilizes non-edible materials, reducing competition with food crops. |
| Third | Derived from algae, also known as green hydrocarbons. Fuels include biodiesel, ethanol, and jet fuel. | Provides a variety of biofuels and can be produced from algae. |
| Fourth | Converts biomass materials, which have absorbed CO ₂ during growth, into fuel, capturing and storing CO ₂ throughout production. | Produces sustainable energy, captures more CO ₂ than it emits, and reduces CO ₂ emissions by replacing fossil fuels. |

➤ **About the Scheme**

- **Financial Support:** Provides financial aid for integrated bioethanol projects using lignocellulosic biomass and renewable feedstock.
- **Commercial Viability:** Aims to establish commercially viable 2G ethanol projects.
- **Environmental and Economic Benefits:** Addresses biomass residue burning, supports ethanol blending targets, reduces fossil fuel dependency, and creates employment.
- **Implementation:** Managed by the Centre for High Technology (CHT) under the Ministry of Petroleum and Natural Gas.

NEWS IN BETWEEN THE LINES

World Biofuel Day

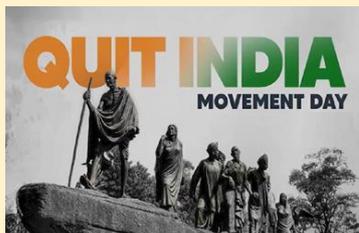


World Biofuel Day is celebrated annually on August 10th to promote biofuels as a sustainable alternative to fossil fuels.

About the World Biofuel Day:

- World Biofuel Day **emphasizes the role of biofuels** in addressing climate change and enhancing energy security by reducing global dependence on fossil fuels.
- The **2024 theme is "Sustainable Biofuels: Fueling a Greener Future"** and will highlight efforts to reduce environmental impact and advance biofuel technologies.
- Biofuels are fuels **derived from biomass**, which includes **plants, agricultural waste, domestic waste and industrial bio-waste**.
- Biofuels are categorized into three generations: **first-generation from food crops, second-generation from non-food biomass and third-generation from advanced sources like algae**.
- India has set an ambitious goal of **achieving 20% ethanol blending with petrol by 2025**, known as the **E20 target**.
- Ethanol production in India is primarily **based on sugarcane**, with the country being the second-largest producer of sugarcane globally.
- The Ethanol Blended Petrol Programme (EBP) was **launched in 2003** to increase the blending percentage of ethanol with petrol in India.

Quit India Movement



Yesterday on 9th of August, the Prime Minister of India paid tribute to the participants of Quit India movement, led by Mahatma Gandhi.

About the Quit India Movement:

- The Quit India Movement was a **massive anti-colonial movement** in India that was **launched on August 8, 1942, during World War II**.
- It was **led by Mahatma Gandhi** and the **Indian National Congress (INC)** and demanded an immediate end to British rule in India.

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| | <ul style="list-style-type: none"> ▪ The movement was also known as the India August Movement or August Kranti. ▪ The Congress Working Committee passed the Quit India Resolution on August 8, 1942, in Bombay, and Gandhi delivered his historic "Do or Die" speech at the Gowalia Tank Maidan (now known as August Kranti Maidan) urging Indians to rise against British rule. ▪ The movement was intended to be peaceful and non-violent and the slogans "Quit India" and "Bharat Chhodo" were used. ▪ Women leaders, such as Sarojini Naidu, Sucheta Kripalani and Kamaladevi Chattopadhyay, played an unconventional role in the movement, even while in jail. ▪ The movement faced opposition from various groups, including the Muslim League, the Hindu Mahasabha and princely states. |
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| <p>Bandhavgarh Tiger Reserve</p>  | <p><i>Recently, officials at Madhya Pradesh's Bandhavgarh Tiger Reserve kept silent for over a month after finding a dead elephant, later burning the carcass and breaking it into fragments.</i></p> <p>About Bandhavgarh Tiger Reserve:</p> <ul style="list-style-type: none"> ▪ The Bandhavgarh Tiger Reserve is a national park and tiger reserve in Madhya Pradesh. ▪ It is located in the Umaria and Katni districts, between the Vindhyan and Satpura ranges. ▪ It was declared a national park in 1968 and then became Tiger Reserve in 1993. ▪ In 1951, India's first white tiger was captured in the region. ▪ The name Bandhavgarh is Sanskrit for "Brother's Fort" and comes from the legend that Hindu Lord Rama gave the fort to his brother Lakshmana to watch over Lanka. ▪ Flora: Notable floral species include Saj, Dhaora, Tendu, Arjun, Amla and Palas. ▪ Fauna: The reserve hosts over 35 mammal species, including Bengal tigers, elephants, leopards and sambar. |
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| <p>Place in News</p> <p>Peru</p> | <p><i>Peru's Mashco Piro tribe recently used bows and arrows to attack loggers suspected of encroaching on their territory in the Amazon.</i></p> <p>Peru (Capital: Lima)</p> <p>Location: Peru is situated in the western part of South America.</p> <p>Political Boundaries: Peru shares its borders with Colombia, Brazil, Bolivia, Chile and Ecuador.</p> <p>Physical Features:</p> <ul style="list-style-type: none"> ▪ Peru is dominated by the Andes mountain range. ▪ Mount Huascarán stands as the country's highest point. ▪ Some notable rivers include the Amazon, Purus, Juruá, among others. ▪ The sierra (highlands) is the region of the Andes; it includes the Altiplano plateau as well as the highest peak of the country. ▪ Lake Titicaca, the largest in South America and shared with Bolivia, lies amidst the Andes.  |
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10 August, 2024

POINTS TO PONDER

- SJVN Limited, a Mini Ratna Schedule 'A' CPSU under the Ministry of Power, has recently commissioned which project in Khandwa, Madhya Pradesh? – **90 MW Omkareshwar Floating Solar Project**
- In which tiger reserve of Uttar Pradesh did a recent incident occur where a 45-year-old man was killed by a herd of elephants while collecting wild mushrooms? – **Dudhwa Tiger Reserve**
- What has the Ministry of Textiles recently empowered cotton ginners across the country to produce, based on QR code certification technology? – **Kasturi Cotton Bharat**
- Which measure has the RBI recently announced to enhance the expeditious clearance of cheques under the Cheque Truncation System (CTS)? – **Implementation of Continuous Clearing of Cheques**
- What type of technology has the Indian Institute of Technology (IIT) Indore integrated into special shoes designed for soldiers? – **Tri-boelectric Nanogenerator (TENG) Technology**

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