

GOVERNANCE

Modified Scheme to Produce 1G Ethanol

Recently, the Department of Food & Public Distribution has notified a modified scheme for extending financial assistance for producing 1st Generation (1G) ethanol.

The aim is to achieve blending targets of ethanol with petrol (Ethanol Blending Programme).

Key Points

Ethanol Blending Programme (EBP):

Aim: It aims at blending ethanol with petrol, thereby bringing it under the category of biofuels and saving millions of dollars by cutting fuel imports and decreasing carbon emissions.

Target: The target is to achieve 20% blending of ethanol by 2025.

Ethanol Extraction from Foodgrains:

- In 2018, the Central Government extended the ambit of the EBP programme to extract the fuel from surplus quantities of food grains such as **maize, jawar, bajra fruit and vegetable waste**.
- Earlier, only excess sugarcane production was allowed to be converted into ethanol for procurement under the programme.
- Financial Assistance for Expansion of Ethanol Distillation Capacity: The government will provide interest subvention (on loans) to encourage the funding in this sector.

Aim:

- To set up distilleries for producing 1st Generation (1G) ethanol from feed stocks such as cereals (rice, wheat, barley, corn & sorghum), sugarcane, sugar beet etc.
- To convert molasses (a sugar byproduct) based distilleries to dual feedstock.

Expected Benefits:

- Enhancing Farmers' Income
- Provide Employment
- Promote Distributed Ethanol Production

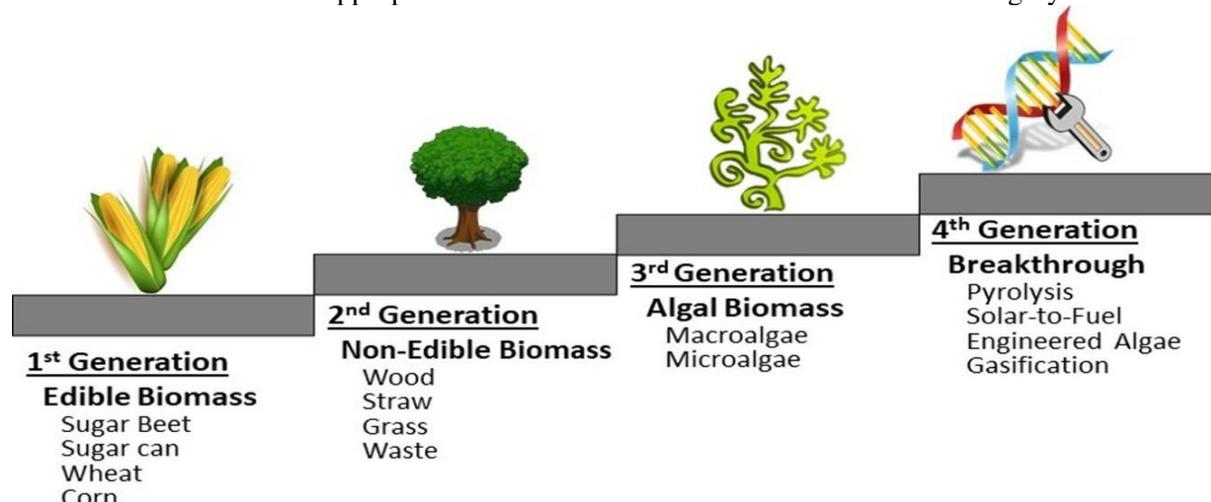
Related Initiatives:

E20 Fuel: Earlier, the Indian government had invited public comments for introducing adoption of E20 fuel (a blend of 20% ethanol with gasoline).

Pradhan Mantri JI-VAN Yojana, 2019: The objective of the scheme is to create an ecosystem for setting up commercial projects and to boost research and development in the 2G Ethanol sector.

Reduction in GST: The Government has also reduced GST on ethanol for blending in fuel from 18% to 5%.

National Biofuel Policy 2018: The Policy categorises biofuels as "Basic Biofuels" viz. First Generation (1G) bioethanol & biodiesel and "Advanced Biofuels" - Second Generation (2G) ethanol, Municipal Solid Waste (MSW) to drop-in fuels, Third Generation (3G) biofuels, bio-CNG etc. to enable extension of appropriate financial and fiscal incentives under each category.



Way Forward

Proper implementation of the biofuel policy and ethanol blending programme should ensure fuel requirements should not compete with food requirements and that only surplus food crops should be used for fuel production.

INDIAN ECONOMY

Hisar Airport inaugurated under RCS-UDAN

Hisar Airport was inaugurated under RCS-UDAN recently.

Key Points

- First flight to the newly constructed Hisar airport in Haryana from Chandigarh was also flagged off under the Regional Connectivity Scheme – Ude Desh Ka Aam Nagrik (RCS-UDAN) of the Government of India.
- Hisar airport is a public licensed airport that is suitable for 18 seat type aircraft.
- The airline Aviation Connectivity & Infrastructure Developers Pvt. Ltd (Air Taxi) was awarded the Hisar – Chandigarh – Hisar route under the UDAN 4 bidding process.
- The airline has become the first start-up airline of the country to assist the nation with Air Taxi services.
- Thus, the Inauguration Marks Commencement of India's First Air Taxi Services from Chandigarh to Hisar.

INTERNATIONAL RELATION

Kashmir Debate in UK's Parliament

Recently, India has expressed its concern over a debate on Kashmir in the Houses of Parliament complex in London.

Earlier in October 2020 a delegation of European Union Members of Parliament (MEPs), comprising 27 Members of the European Parliament (MEPs) from Italy, Britain, France, Germany, Czech Republic, and Poland, visited Srinagar, nearly three months after the revocation of Article 370.

Key Points

Background:

- A debate was organised by some Members of Parliament in the United Kingdom (UK), titled "Political situation in Kashmir".
- It raised concerns of alleged human rights violations and called on the UK government to seek access to the region for direct reports from Jammu and Kashmir and Pakistan-occupied Kashmir (PoK) to be presented in the UK Parliament in future.

India's Concern:

- The terminology used in the debate was problematic, regarding the reference to 'Kashmir' in the title - there is a need to differentiate between the Union Territory of Jammu and Kashmir, which is an integral part of India, and Pakistan Occupied Kashmir (when the erstwhile princely state of Kashmir legally acceded to India in October 1947, this part was forcibly and illegally occupied by Pakistan).
- The debate ignored current ground reality of the Union Territory of Jammu and Kashmir and, instead chose to reflect false assertions of the kind promoted by a third country (Pakistan), such as unsubstantiated allegations of 'genocide', 'rampant violence' and 'torture'.

India's Stand:

- The Indian High Commission in London sought to highlight that since last year, a smart wi-fi project has enabled high-speed internet access in the region and that despite threats of terror attacks, challenging weather conditions and the Covid-19 pandemic, landmark District Development Council (DDC) elections were concluded in December 2020.
- India stands ready to engage with Pakistan on all outstanding issues – including on Jammu and Kashmir in accordance with the Shimla Agreement (1972) and the Lahore Declaration (1999) in an atmosphere free from terror, hostility and violence.

UK Government's Stand:

- Although there were human rights concerns on both sides of the Line of Control (LoC), the UK will not play any mediatory role in a bilateral India-Pakistan matter.
- The government's policy (on Kashmir) remains stable, it's unchanged.

- It continues to believe that India and Pakistan need to find a lasting political resolution to the situation that takes into account the wishes of the Kashmiri people as laid out in the Simla Agreement (1972).

NATIONAL DEVELOPMENT

UAV Procurement by Indian Army

The Indian Army has signed a contract to buy high-altitude drones from ideaForge for USD 20 million.

- ideaForge is a start-up founded and incubated by the alumni of Indian Institute of Technology-Bombay (IIT-B).
- The contract is for a high-altitude variant of SWITCH UAV, an indigenous system used in surveillance operations.

Importance of UAV for the Army:

The Army has placed an order for the advanced high-altitude version of SWITCH UAV, a vertical take-off and landing drone. It is a fixed-wing hybrid Unmanned Aerial Vehicle (UAV). Its features include:

- Advanced flight time with a range of 15 km.
- Around 2.6m long and 1.8m wide and weighs less than 6.5 kg.
- Higher safety and simple operation with additional fail-safe redundancies.
- Used for long-duration operations in harsh environments for day and night surveillance in Intelligence, Surveillance and Reconnaissance (ISR) missions.
- Used in Photogrammetry - the technology of obtaining reliable information about physical objects and the environment through the process of recording, measuring and interpreting photographic images and patterns of electromagnetic radiant imagery.

Other Uses: Crowd Monitoring, Disaster Management, Precision Agriculture, Mining, etc.

SCIENCE AND TECHNOLOGY

Doppler Weather Radars

Recently, the Union Minister for Earth Sciences commissioned two of the ten indigenously built X-Band Doppler Weather Radars (DWR) which will closely monitor the weather changes over the Himalayas.

This new system will capture, process and make available for use satellite data within seven minutes as opposed to 20 minutes taken by earlier systems.

Key Points

Developed by : The DWR has been designed and developed by ISRO and manufactured by Bharat Electronics Limited (BEL), Bengaluru.

Significance:

Covering the central and western Himalayas, these dual polarised radars will gather atmospheric variations and pick signals of extreme weather events.

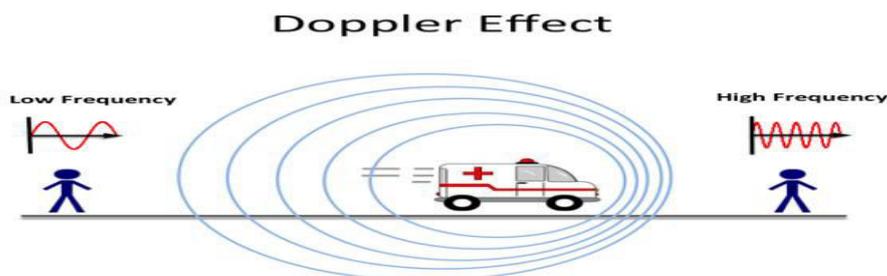
Radar (Radio Detection and Ranging):

It is a device which uses electromagnetic waves in the microwaves region to detect location (range & direction), altitude, intensity and movement of moving and non-moving objects.

Doppler radar :

It is a specialized radar that uses the Doppler effect to produce velocity data about objects at a distance

Doppler effect:

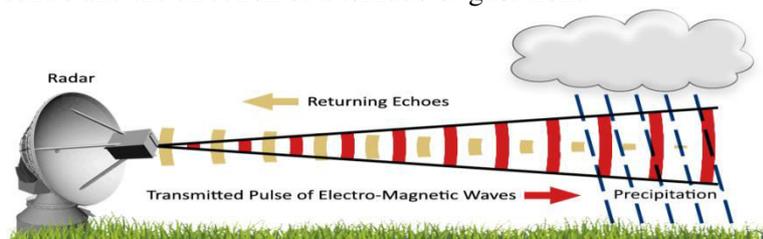


When the source and the signal are in relative motion to each other there is a change in the frequency observed by the observer. If they are moving closer frequency increases and vice versa. It does this by bouncing a microwave signal off a desired target and analyzing how the object's motion has altered the frequency of the returned signal.

This variation gives direct and highly accurate measurements of the radial component of a target's velocity relative to the radar.

Doppler Weather Radar:

Based on Doppler principle the radar is designed to improve precision in long-range weather forecasting and surveillance using a parabolic dish antenna and a foam sandwich spherical radome. DWR has the equipment to measure rainfall intensity, wind shear and velocity and locate a storm centre and the direction of a tornado or gust front.



Types Of Doppler Radars : Doppler radar can be divided into several different categories according to the wavelength which are L,S,C,X,K.

X band radars: They operate on a wavelength of 2.5-4 cm and a frequency of 8-12 GHz. Because of the smaller wavelength, the X band radar is more sensitive and can detect smaller particles.

Application:

These radars are used for studies on cloud development because they can detect the tiny water particles and also used to detect light precipitation such as snow.

X band radars also attenuate (become less effective) very easily, so they are used for only very short range weather observation.

BIODIVERSITY & ENVIRONMENT

Nagi-Nakti Bird Sanctuaries

Recently, Bihar's first state-level bird festival 'Kalrav' started at the Nagi-Nakti bird sanctuaries in the Jamui district, Bihar.

It is a 3-day event and is expected to draw experts and bird lovers from all over the country.

Key Points

About:

- The Nagi Dam and Nakti Dam are two sanctuaries so close to each other that they can be taken as one bird area.
- The Nagi- Nakti Bird Sanctuaries have been the home of a wide variety of indigenous species of birds and of migratory birds that turn up during the winters from places like Eurasia, Central Asia, the Arctic Circle, Russia and Northern China.

Avian Fauna :

Over 136 species of birds have been spotted at these sanctuaries.

Bar-headed geese: Around 1,600 bar-headed geese, which is about 3% of the global population of this variety, have been seen here, as per a report of the Wetlands International and because of this rare phenomenon, the Birdlife International, a global body, has held the Nagi Dam Bird Sanctuary to be globally important for conservation of birds' population and has declared it as an important bird area.

- Wetland International is a global not-for-profit organisation dedicated to the conservation and restoration of wetlands.
- BirdLife International is a global partnership of conservation organisations (NGOs) that strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources.

Other major birds: Indian Courser, Indian Sandgrouse, Yellow-wattled Lapwing and Indian Robin.

Major threats to the biodiversity of the sanctuaries: Agricultural runoff; Land dispute between Irrigation and Forest Departments; Leasing out of the site for fishing.

Other Bird Sanctuaries of Bihar:

- Gautam Budha bird sanctuary, Gaya
- Kavar Jheel bird sanctuary, Bigusarai
- Kusheshwar asthan bird sanctuary, Darbhanga

INDIAN HERITAGE AND CULTURE

Jallikattu

As the assembly polls are to be held in Tamil Nadu in 2021, the Pongal festival and Jallikattu, the traditional bull-taming sport, have caught the attention of the Political Parties in the country.

Key Points about Jallikattu:

- A tradition over 2,000 years old, Jallikattu is a competitive sport as well as an event to honour bull owners who rear them for mating.
- It is a violent sport in which contestants try to tame a bull for a prize; if they fail, the bull owner wins the prize.
- It is popular in Madurai, Tiruchirappalli, Theni, Pudukkottai and Dindigul districts of Tamil Nadu known as the Jallikattu belt.
- It is celebrated in the second week of January, during the Tamil harvest festival, Ponga
- Jallikattu is considered a traditional way for the peasant community to preserve their pure-breed native bulls.

Current Legal Position on Jallikattu:

- The state government has legalised these events, which has been challenged in the court.
- In 2018, the Supreme Court referred the Jallikattu case to a Constitution Bench, where it is pending now.

Conflict to be Resolved:

Whether the Jallikattu tradition can be protected as a cultural right of the people of Tamil Nadu which is a fundamental right.

Article 29 (1) against Rights of animals.

Article 29 (1) mandates that “any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same”.

Position in Other States for Similar Sports:

- Karnataka too passed a law to save a similar sport, called **Kambala**.
- Except in Tamil Nadu and Karnataka, where bull-taming and racing continue to be organised, these sports remain banned in all other states including Andhra Pradesh, Punjab and Maharashtra due to the 2014 ban order from the Supreme Court.



IMPORTANT FACTS FOR PRELIM

Thiruvalluvar Day

The Prime Minister remembered Thiruvalluvar on the occasion of Thiruvalluvar Day (15th January 2021), observed to mark the birth anniversary of Tamil poet and philosopher.

Key Points

- It was first celebrated on 17th-18th May in 1935.
- In the present time, it is usually observed either on 15th or 16th January in Tamil Nadu and is a part of **Pongal** celebrations.

About Thiruvalluvar:

- Thiruvalluvar, also called Valluvar, was a Tamil poet-saint.
- He is regarded as a cultural and moral icon for Tamils across caste and religious lines.
- The period when he lived is debated, as is his religious identity.
- Some place him in the third or fourth century; others put him in the eighth or ninth.
- Some call him a Hindu; some trace his past to Jainism; Dravidian groups count him as a saint, as he dismissed the caste system.
- His primary work Thirukkural (contribution to Tamil Literature) contains 1330 couplets (kurals).
- The text is divided into three parts with teachings on dharma, artha, and kama (virtue, wealth and love).

DAILY ANSWER WRITING PRACTICE

Qns. Discuss the role of ethics and values in enhancing the following three major components of Comprehensive National Power(CNP) viz. human capital, soft power(culture and policies), and social harmony. (150 words) (UPSC GS-4 Mains 2020).

Ans:

Ethics is a system of principles that helps us tell right from wrong, good from the bad. Ethical values (like honesty, trustworthiness, responsibility) can help to make rational decisions, whether at the individual, societal or national level.

Role of Ethics & Values in Enhancing Human Capital:

- Ethics is all about the choices that an individual makes. People always face many dilemmas and choices that affect the quality of their lives.
- Ethics & values make an individual aware that their choices have consequences, both for themselves and others.
- Thus, ethics & values build credibility, improves decision making, and provides long term gains.

Role of Ethics & Values in Enhancing Social Harmony:

- Ethics & values are about character; the sum of qualities that defines a person. The same principle applies to society.
- Ethics & values develop norms of behaviour that everyone should follow in society. If every person acts with a selfish motive, society might fall into chaos & anarchy.
- There is nothing wrong with pursuing one's interests. However, an ethical person must be willing – at least sometimes – to place others' interests ahead of self-interest because of our responsibility to society.
- Moreover, often ethics succeeds law in safeguarding society. The law machinery is often found acting as a mute spectator, unable to save the society and the environment.

Role of Ethics & Values in Enhancing Soft Power:

- International relations are largely driven by the ideology of realism, which propagates national interest precedes every action of a nation.
- However, pursuance of national interest must not always be fulfilled with Hard' power (Military power, economic power). The soft power (a country's image due to its culture & values) also secures national interest without compromising others' interest.
- In this regard, ethics & the country's ancient values (for example, Idea of Vasudeva kutumbakam in India) revive national pride and project a country's peaceful image.

Conclusion

As stated by India's current president, 'Nations are not built by governments alone, each citizen is a nation-builder', there is an immense role of ethics and values in enhancing the comprehensive national power of a country.

DAILY QUIZ

1. According to the CPCB data, Air Quality Index (AQI) keeps a tab on which of the major air pollutants in the atmosphere?
1. Particulate Matter (PM10)
 2. Particulate Matter (PM2.5)

3. Nitrogen Dioxide (NO₂)
4. Sulphur Dioxide (SO₂)
5. Carbon Dioxide (CO)

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2, 3 and 4 only
- c) 1, 2, 3 and 4 only**
- d) All of the above

2. According to a recent study, the wildlife corridor of the Aravallis harbours a richer “variety of mammals” than the Asola Wildlife Sanctuary. Asola WLS is spread across which of the following states?

- a) Rajasthan and Gujarat
- b) Delhi and Haryana**
- c) Gujarat and MP
- d) Punjab and Haryana

3. Recently, Startup India International Summit was held in New Delhi which saw participation of members of BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) countries, under the event name –

- a) Super Start Asia-100
- b) Operation Arambh
- c) Operation SECURE
- d) Prarambh**

4. Which of the following Act is exclusively intended to deal with combating hunting and poaching?

- a) Environment Protection Act, 1986
- b) Wildlife Protection Act, 1972**
- c) Forest (Conservation) Act, 1980
- d) Biological Diversity Act, 2002

5. Dzukou valley is a popular trekking destination known for its exotic flowers, is spread across which of the following states?

1. Assam
2. Nagaland
3. Manipur

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only**
- d) All of the above