

Wednesday

20/12/23

Q.

Elucidate the challenges associated with ethanol blending in India and suggest measures to overcome the challenges (250 words)

Ethanol Blending refers to the process of mixing ethanol and petrol to address the climate change and also to reduce country's dependence on crude oil imports.

Significance to Ethanol Blending :

1. Reduce dependency on Imports : Economically, improves our Current Account Deficit and make India self Reliant.
2. Increase the farmers Income : As Ethanol which will be produced will be by the farmers hence contributing to the diversification of their basket.
3. Less polluting : Ethanol as compared to petroleum products are less polluting and given better efficiency at low cost.
4. Helps in Global commitments : Ethanol blending programme will surely help India in meeting its Global IPCC, COP27, Panch-sheel commitments.

"The Government of India has advanced the target for 20% ethanol blending in petrol (E20) to 2025 from 2023."

विश्व-युद्ध के दौरान जल संकट को आलोचनात्मक परीक्षण करें।
Challenges with Ethanol Blending: 1

- 1) National policy on Biofuel primarily focuses on food based products for Biofuels, which comes under Category 1.
- 2) Risk of Hunger: And hunger of the country may impact because of the ~~hunger~~ focuses on food products in Ethanol blending.
- 3) Water crops: The crops used in Biofuels are majority water intensive and requires proper Irrigation.
- 4) Lack of technology and Infrastructure: India lacks the Infrastructure and technology which may increase the efficiency of Biofuels.

Way forward: 1

- 1) Production of Biofuels, Ethanol, only from food products can't be a solution. Hence Ethanol can also be produced from Waste.
- 2) The Government should give farmers the options of alternate crops which can be used for Biofuel, Ethanol and are less water intensive.

- 3) Framework for Ethanol production units:
To overcome their implementation, and
Administrative ~~and~~ problems.
- 4) India should invest more on Infrastructure
for storage, handling.

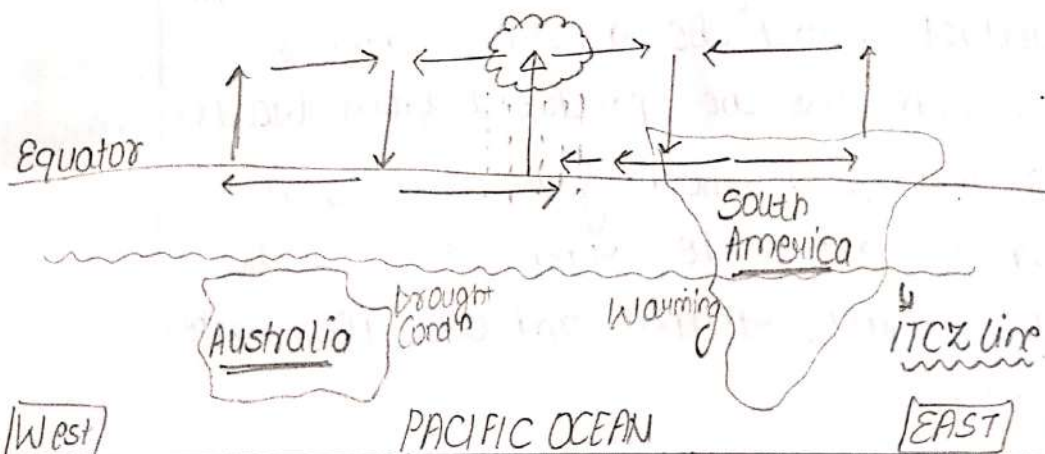
India is 3rd largest energy consuming Nation
and is a significant part of India's energy
requirement is met through imports.
Hence Ethanol blending programme will
play a significant role in and out.

Qo

What do you know about the El Nino South-
ern Oscillation phenomenon (ENSO)? Analyse
the role of El Nino on causing extreme
floods in the ongoing NE monsoon in S.
South India (250 words)?

Soln.

Once in 2-7 years in Oct-Nov, the ITCZ
moves too much south of the Equator,
resulting in the weakening of trade winds,
hence upwelling is reduced.



The warm tropical surface water earlier flowing westward, flows back eastwards and causes a further reduction in upwelling.

And, this results in warm surface water pool along the Centre and S. America coast which is called El-Niño.

This El-Niño causes the air pressure to drop in the East Pacific Ocean and rise in West Pacific Ocean. This see-saw variation in air pressure is called El-Niño Southern Oscillation (ENSO).

Impact of El-Niño :-

- i) It cause precipitation over the coastal desert of Peru and Chile and cause drought and dry condition in India and Australia.

But recently, many parts of S. Tamil Nadu got flooded due to cyclone Michaug.

And it is because of the North West Monsoon fuelled by ENSO.

El Niño generally enhances rainfall extremes during the North West Monsoon (NWM).

Cyclonic circulations are whirls of winds in the upper layer of atmosphere. They induce low pressure areas in the atmosphere's lower

layer, enhance causing rainfall.
And North West Monsoon along with this
cyclonic circulation causes flooding conditions
in South India.

2) El Niño impacts Marine ecosystem and
kills fish along with Peru & Chile.

3) It causes mass coral bleaching due to
unstable and disturbs of climatic conditions

Strong upper level divergence leads to
significant lower level convergence. As a
result, lot of moisture is attracted towards
coast of Tamil Nadu. And led to extreme
rainfall.

Hence all these abnormal situations are
happening because of the extreme climate
change and Anthropogenic Activities and
creates a vicious cycle.

So, along with mitigation, Adaptation measu-
res should also be the priority of our
country. So that we can reduce the loss
economically, socially and universally.

Q.

The Telecommunication bill, 2023 is the primary step in addressing privacy concerns and simplifying. Examine (150 words)?

Recently, Telecommunication Bill 2023 has been passed in the parliament to reform the country's century old Telecom law "Telegraph Act of 1885".

Provisions of the Bill:

- 1) Obtaining SIM or other telecom resources through fraud will result in fine and imprisonment.
- 2) New Bill contains the provision related to cloning of SIM
- 3) The telecom operator is been mandated to capture verifiable Biometrics data.
- 4) New rules for spectrum allocation and provides for non auction route for Airlines for satellite based communication services.
- 5) Proper provisions for Grievance Redressal mechanism
 - Through proper verification, Biometrics safety concerns can be overcome.
 - Appointment to TRAI has been amended and people/individuals with experience will be part of it.
 - Offences and punishment have been stringent and more strict.

- Prior consent to receive messages or advertising messages are in the hand of individual.

Status of the Telecom Sector in India:

The telecom industry of India is the 2nd largest in the world and also contributes to 6% of total FDI inflow in India. Hence addressing the problems in Telecom sector was mandatory for India's economic growth.

India's Initiatives:

1. PM Wani Scheme
2. Bharat Net Scheme
3. PLI (Production linked Incentive for manufacturing of Telecom and network products)
4. Bharat 6G Alliance.