

3. Production of CNG from Stubble

Prelims Level: Pollution and waste Management

Mains Level: GS-III, Conservation, Environmental Pollution and degradation, Environmental Impact Assessment.

Why in News?

- As part of the SATAT scheme, several PSUs Including Indian Oil Corporation Limited, Bharat Petroleum Corporation Limited had launched an Expression of Interest (EOI) for procurement of CBG from the entrepreneurs at an assured price.

Sustainable Alternative Towards Affordable Transportation (SATAT):

- Launched 2018, SATAT is aimed at promoting Compressed Bio-Gas (CBG) as an alternative, green transport fuel for efficient management of biomass and organic waste.
- Similar to LNG, the CBG produced under SDATAT can be sold to automobiles as clean fuel, and to domestic, industrial and commercial consumers which are using LPG and other fuels.

Bio-Gas:

- Bio-Gas is produced naturally through a process of anaerobic decomposition from waste/ bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc.
- After purification, it is compressed and called CBG, which has pure methane content of over 95%.
- Compressed Bio-Gas is exactly similar to the commercially available natural gas in its composition and energy potential.
- With calorific value (~52,000 KJ/kg) and other properties similar to CNG, Compressed Bio-Gas can be used as an alternative, renewable automotive fuel.

Benefits of CBG on a commercial scale:

- Responsible waste management, reduction in carbon emissions and pollution
- Additional revenue source for farmers
- Boost to entrepreneurship, rural economy and employment
- Support to national commitments in achieving climate change goals
- Reduction in import of natural gas and crude oil
- Buffer against crude oil/gas price fluctuations

GOBAR-DHAN-Scheme:

- The Government of India had launched the GOBAR-DHAN (Galvanising Organic Bio-Agro Resources) scheme in 2018 to convert cattle dung and solid waste in farms to CBG and compost.
- It is funded under Solid and Liquid Waste Management (SLWM) component of Swachh Bharat Mission-Gramin (SBM-G) to benefit households in identified villages. The scheme proposes to cover 700 projects across India in 2018-19.

Way Forward:

- Compressed Bio-Gas networks can be integrated with city gas distribution (CGD) networks to boost supplies to domestic and retail users in existing and upcoming markets. Besides retailing from OMC (oil marketing company) fuel stations, Compressed Bio-Gas can at a later date be injected into CGD pipelines too for efficient distribution and optimised access of a cleaner and more affordable fuel.

