

2. The project to use paddy straw to provide compressed biogas can transform the rural economy of India. Discuss.

India's first Compressed biogas plant to convert paddy straw to compressed biogas was opened in Sangrur, Punjab, by a private company. It will help to in 'waste to wealth' by converting straw into compressed gas. Potential to reduce stubble burning and transform rural economy.

Effort to mitigate stubble burning.

The stubble burning in North West regions well known for increased pollution. But reality is it is spreading even to Rabi and other parts of country. This may lead to catastrophic effects.

For a worthful solution against these effects NITI Aayog (I) FAO, in 2019 explored ways to convert paddy straw into usable forms. Conversion of paddy straw into Ex-situ purpose [paddy straw for Bio-energy thermal plants] which can complement to In-situ purpose [putting paddy straw into the soil].

Results of the project - Potential

1. Mobilising 30% of paddy straw and stubble, can reduce 9.7 billion equivalent of CO₂ and 66000 tonnes of PM 2.5.
2. Help to earn ₹550- ₹1500 / quintal by selling ~~pa~~ converted paddy straw depending on market condition.
3. Alternative - paddy straw can be used as pellets in Thermal power plants as alternative to coal and fuel ~~in~~ compressed bio gas - supplementing SATAT [Sustainable Alternative to Affordable Transport] - government scheme to provide sustainable transport.

Benefits to transform - Rural economy

1. CBG - ₹46/kg - can be made supplementing SATAT scheme
2. 1 acre of stubble has potential to generate >30% energy needs - Renewable energy.
3. The slurry can be used to improve soil fertility.
4. Employment generation for rural youth - Large value chain.

Thus the Initiative - first step win-win situation in renewable energy revolution. It is environment friendly, Increase farmers income, Reduce GHG emission, increase Rural supply chain. It is the game changer to transform the rural economy.