Climate Change and Sustainable Development

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Extraction of Hydrocarbon – A Bane to Rural Soil

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Introduction

'Hydrocarbon' is composed of carbon and hydrogen only. Hydrocarbons play a vital role in our daily life. Petrol, diesel and kerosene oil LPG, CNG are all hydrocarbons and their mixture. LPG is the abbreviated form of Liquefied Petroleum Gas and CNG stands for Compressed Natural Gas. 'LNG' (Liquefied Natural Gas) is also introduced these days. This is also a fuel. Petrol, diesel and kerosene oil are obtained by the fractional distillation of petroleum found under the earth's crust. Coal gas is obtained by the destructive distillation of coal. Natural gas is found in upper strata while drilling of oil wells. The gas after compression is known as compressed natural gas. Automobiles need fuels like petrol, diesel and CNG. Petrol and CNG operated automobiles cause less pollution. All these fuels contain mixture of hydrocarbons, which are sources of energy. Hydrocarbons are also used for the manufacture of polymers like polypropene, polythene, polystyrene etc. Higher hydrocarbons are used as solvents for paints. They are also used in the manufacture of many dyes and drugs.

Reaction of Hydrocarbons on Sequential Changes in Earth And Yield

Hydrocarbons are a class of compounds primarily composed of carbon and hydrogen, and they are considered as major components of oil, natural gas and pesticides. These substances decrease the photosynthetic ability of plants, notorious form of oil spills, and innumerable harm to ecosystems.

Extraction of Hydrocarbon gases for fuel requirement paves affects the land fertility. Methane gas, Ethane gas and other

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Hydrocarbon traces get extracted the agricultural lands become completely uncultivable. Followed by, groundwater will completely become unfit for drinking. And also the various by-products released during this extraction process leads to the release of several toxic gases that will significantly affect the health of the citizens.

The natural biodegradation in polluted soils in farm field is often slow due to factors such as high hydrocarbons concentrations, joint pollution with other pollutants (heavy metals), limiting nutrient content, insufficient water or oxygen supply, or low bioavailability of pollutants.

Agricultural crops can be injured when exposed to high concentrations of hydrocarbons which leads to reduced growth and yield to premature death of plants. This will affect the agricultural land and water. When we back to usage of hydrocarbon that will contribute to global warming and climate change.

Hydrocarbons reduce soil fertility, reduce nitrogen fixation, reduce crop yield, deposition of silt in tanks and reservoirs.

Extraction of Hydrocarbons in Delta Region

Conservative oil and gas are tapped from between the cap-rocks and more resistant rock and the sedimentary layer where oil and gas are collected. When a well is drilled into the earth, the pressure of the reservoir is released and up to a fifth of the volume is extracted utilizing this pressure. Extracting the rest of the reservoir requires the injection of a fluid (water) under high pressure to force out any oil or gas that may be trapped in the reservoir.

Hydrocarbon extraction consists of drilling a hole of nearly 6000 ft underground and they will pass high pressure chemical water. After passing High Pressure Chemical Water, by using Hydraulic Fracturing Technique, they will crack the underground area and extract Hydro Carbons along with Underground Water which causes underground water problems.

Hydrocarbon available in underground is extracted and if the extraction process is carried out in agricultural land or nearby,

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then it is very dangerous to agriculture. During extraction process, large amount of water is taken out along with hydrocarbon gas. It results in depletion of underground water and if it located near sea, then chances of salt water can move into agricultural land.

For this process, they need 400 Lorries of sand and water and lead to water scarcity in nearby places. The Impacts of this Hydrocarbon extraction adversely affects the livelihood of farmers, land fertility and affected concern about underground water. This destroys the livelihood of people and productivity is lower than the traditional practices.

While an extraction of hydrocarbon from the lands creates great impact on the underground water, affects all fertile lands and usage of evil chemicals in the fields. During an extraction more than 635 toxic chemicals and radiation chemicals are being extracted. There is no life for common people.

Conclusion

There are various methods where we can extract hydrocarbon. As per latest study, 14 to 25 million tons of hydrocarbon are coming out to atmosphere per year. One of the main sources is dumping of waste plastics, alternate or renewable source of energy. So if utilize such wastes for hydrocarbon extraction, then there won't be any problem to agriculture. We can avoid the migration of farmers from their own lands. Construct peaceful life for a common man.

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