

Coal and Petroleum



Natural Resources

Natural resources are materials from nature, including air, water, sunlight, soil, and minerals. They are classified into:

- ➔ **Inexhaustible Resources** – Abundant and unaffected by human use (e.g., sunlight, air).
- ➔ **Exhaustible Resources** – Finite and can be consumed completely (e.g., forests, wildlife, coal, petroleum, natural gas).

Fossil Fuels

Fossil fuels, such as coal, petroleum, and natural gas, form over millions of years from decayed plant and animal matter.

Coal

- ➔ A fossil fuel derived from ancient plants, extracted through mining.
- ➔ Its formation over time is called **carbonization**.
- ➔ Products of coal:
 - **Coke** – A dense, pure carbon material used in steelmaking.
 - **Coal Tar** – A black liquid used in dyes, naphthalene balls and paints.
 - **Coal Gas** – A by-product used as an industrial fuel.

Petroleum (Crude Oil)

- ➔ Formed from marine organisms buried under sediments over millions of years.
- ➔ Extracted and refined through fractional distillation to separate components like:
 - **LPG** – Domestic/industrial fuel.
 - **Petrol** – Used in vehicles and aviation (aircraft).
 - **Diesel** – Fuel for trucks and generators.
 - **Paraffin Wax** – Used in candles, ointments, vaseline.
 - **Bitumen** – Used in road construction.

Natural Gas

- ➔ A hydrocarbon gas, primarily methane, stored under pressure.
- ➔ **Compressed Natural Gas (CNG):**
 - Used for power generation, vehicle fuel, and industrial supply.
 - Cleaner than petrol and diesel, reducing emissions by 50%.

Conservation of Fossil Fuels

Fossil fuels are non-renewable and contribute to pollution. Conservation measures include:

- ➔ Driving at moderate speeds.
- ➔ Turning off engines at stops.
- ➔ Maintaining proper tyre pressure and regular vehicle servicing.

Sustainable practices help preserve these vital resources and reduce environmental harm.

