

**“In spite of adverse environmental impact, coal mining is still inevitable for development”. Discuss.**

- There **are numerous damaging environmental impacts of coal in the form of air and water pollution** that occur through **its mining, preparation, combustion, waste storage, and transport.**
  - **Pollution** due to exposure **of mining waste to air and water.**
  - Coal mining results in **methane emissions**, a powerful greenhouse gas.
  - **Deforestation** when trees are cut down or burned for **clearing the way for a coal mine.**

**Still, coal is inevitable for development. Because :**

- **Developmental needs**
  - India needs more **energy to fuel its growth.** Coal is one of the **Cheapest and most easily available energy sources.** India has **fifth largest coal reserves in the world.** In order to provide electricity to millions of its poor, India has to expand and accelerate its energy production.
- **Non viability of alternatives**
  - **Despite the push for renewable and clean energy resources** such as LPG and nuclear technology, **there has been no substitute to replace coal. Coal still constitutes around 60% of India’s energy share.**
  - **Solar power requires large tracts of land compared to thermal plants.** For 1 MW power generation solar plant needs 5 acres whereas thermal power needs 0.9 acre.
  - Intermittent nature of renewable energy and **low-cost viability in storage and transfer of renewable energy** is also a concern.
- **Employment**
  - Coal provides many jobs. Unlike other forms of energy (nuclear, natural gas, oil, hydroelectric), **coal provides many jobs in removing coal from the earth, transporting it to the utility, burning it, and properly disposing of coal ash.**
  - Coal mines in North East India provides employment to most under developed regions. **For example, Rat hole mining in Meghalaya.**

- Apart from steam coal which is used to generate electricity, **metallurgical coal is used in production of various metals (steel production).**
  
- A **lower growth trajectory of renewable energy** in view of the **challenges and uncertainty of prices, storage costs, grid connectivity** and parity make it **over-ambitious to expect them to be central for India's development.**
  
- **Thus, in the wake of ever-growing population, increasing energy demand and lack of other alternative source of fuel coal** seems to be the only **source of fuel for the development of our economy.**