

Household air pollution

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Why in news?

- A recent study has stated that the single greatest contributor to air pollution in India is the burning of solid fuels in households.

Household air pollution (HAP):

- Cooking using solid fuels (such as wood, crop wastes, charcoal, coal and dung) and kerosene in open fires and inefficient stoves causes household pollution.
- These cooking practices are inefficient, as they produce a range of health-damaging pollutants, including **PM 2.5, small soot particles** that penetrate deep into the lungs.
- In poorly ventilated dwellings, **indoor smoke can be 100 times higher than acceptable levels for fine particles.**
- Exposure is particularly high among women and young children, who spend the most time near the domestic hearth.
- Moreover, the HAP produced indoors travel outdoors and become a contributor to ambient air pollution.
- In India, in **states such as Bihar, Uttar Pradesh, Madhya Pradesh, Orissa, Jharkhand, Rajasthan, Chhattisgarh and Assam**, around **1% of the rural population regularly uses solid fuels.**
- **Effects:**
 - Household air pollution causes **no communicable diseases** including stroke, ischemic heart disease, chronic obstructive pulmonary disease (COPD) and lung cancer.
 - Each year, close to 4 million people die prematurely from illness attributable to household air pollution.
 - **Close to half of deaths due to pneumonia among children under 5 years of age** are caused by particulate matter (soot) inhaled from household air pollution.

- **Black carbon (sooty particles) and methane** emitted by inefficient stove combustion are **powerful climate change pollutants**.
- The ingestion of kerosene is the leading cause of **childhood poisonings**.
- A large fraction of the **severe burns and injuries** occurring in low- and middle-income countries are linked to household energy use for cooking, heating and/or lighting.