



## Socio-Ecological Impact of LPG Price Escalation

**For Prelims:** [Pradhan Mantri Ujjwala Yojana \(PMUY\)](#), [Liquefied Petroleum Gas](#), [Biogas](#), [Renewable energy](#), [PAHAL scheme](#), [Direct Benefit Transfer Scheme](#)

**For Mains:** Socio-economic and environmental implications of reliance on fuelwood, Initiatives to promote LPG usage.

[Source: TH](#)

### Why in News?

Recently, a study revealed heavy reliance on fuelwood in Jalpaiguri, West Bengal despite government efforts to [promote Liquefied Petroleum Gas \(LPG\)](#).

- It highlights the **high prices of LPG** and environmental impact of reliance on fuelwood, raising sustainability concerns and emphasising the need for accessible alternatives.

### What are the Key Highlights of the Study?

- **Dependence on Forests for Fuelwood:** Local communities in Jalpaiguri heavily **rely on forests for fuelwood** due to **limited access to alternative [cooking fuels](#)**.
- **Economic Constraints:** The cost of commercial LPG cylinders, priced at over Rs 1500 is considered exorbitant for many households, particularly those **below the [poverty line](#)**.
- **Government Initiatives:** Government schemes, such as the [Pradhan Mantri Ujjwala Yojana \(PMUY\)](#), facilitated the transition from fuelwood to LPG initially, but the **subsequent increase in LPG prices posed a challenge**.
  - Despite efforts to increase LPG penetration in rural areas, many households only refill their cylinders infrequently due to the high cost.
- **Environmental and Social Implications:** Dependence on fuelwood contributes to **forest degradation** and increases the risk of [human-wildlife conflicts](#), particularly encounters with [elephants](#).
  - The persistence of fuelwood usage jeopardises **forest health, wildlife habitats, and local livelihoods**.
- **Sustainable Alternatives:** Collaborative efforts with the **West Bengal Forest Department and Joint Forest Management Committees** aim to promote sustainable forest management practices.
  - Initiatives include **planting saplings of high fuelwood value in villages**, promoting **efficient cooking stoves**, optimising **shade tree density** in tea plantations, and fostering multi-stakeholder engagement for resource governance.
- **Locally Acceptable Solutions:** To secure forests, wildlife, and livelihoods, it is imperative to develop locally acceptable and sustainable alternatives to fuelwood.
  - Community involvement and engagement with relevant stakeholders are crucial for the success and adoption of **alternative cooking fuels and forest conservation efforts**.

## Has the Government Pushed the Use of LPG?

- The Indian government has made efforts to increase LPG adoption in rural households:
  - Launched the [Rajiv Gandhi Gramin LPG Vitruk scheme](#) in **2009** to expand LPG distribution in remote areas.
  - Initiated [direct benefit transfers for LPG under the 'PAHAL' scheme](#) in **2015**.
  - Implemented **direct home-refill deliveries and the 'Give it Up' program** in **2016**.
  - Introduced the [Pradhan Mantri Ujjwala Yojana \(PMUY\)](#) in **2016** to install LPG connections in 80 million below-poverty-line households.
  - The scheme also provides a [subsidy of Rs 200 for every 14.2-kg cylinder, which increased to Rs 300 in October 2023](#).
- However, despite these efforts, **LPG prices in India were reportedly the highest among 54 countries in 2022, at around ₹300/liter.**

### Note:

- The prices of **LPG, petrol, and diesel** in India are among the highest in the world. While arguments **include external factors and higher prices globally**, the real impact is greater in India due to differences in purchasing power and affordability.
  - Using [purchasing power parity \(PPP\) dollars](#), the price of petrol in India is the 3rd highest globally, behind only Sudan and Laos.
  - **LPG prices in India are the world's highest.** Diesel prices in India are the 8th highest.
- Data from the **2014-2015 ACCESS survey**, conducted by the **Council on Energy, Environment and Water**, found **LPG's cost to be the foremost barrier to its adoption and continued use in rural poor households.**
  - Thus, 750 million Indians primarily use solid cooking fuels (wood, dung, agricultural residues, [coal](#), and charcoal) every day.
  - Solid cooking fuels are associated with innumerable health hazards and socio-economic and environmental impacts.

## What Drives India's High LPG Prices?

- **Dependency on Imports:**
  - India relies heavily on imports for LPG, with more than **60% of its needs being met through imports.**
  - This import dependence contributes significantly to the pricing dynamics of LPG in the country.
  - India's LPG prices are influenced by the average **Saudi Contract Prices (CP)** for propane and butane.
    - LPG is a mix of gasses, mainly consisting of **butane and propane**, with the percentage of butane limited.
    - The CP is the international price for LPG trading, as set by Saudi Aramco.
    - The average Saudi CP increased from USD 454 per tonne in FY20 to USD 710 in FY23, contributing to the hike in LPG prices.
    - Analysts attribute this rise to improved **demand from Asian markets, especially for petrochemicals**, where propane serves as a crucial feedstock.
- **Import Dynamics:**
  - India's import of **8.7 million tonnes of LPG in April-September 2022** out of a **total consumption of 13.8 million tonnes** underscores its reliance on imported LPG.
  - The pricing formula for LPG in India is dependent on global market trends, particularly in the **Middle East, which is India's largest LPG supplier.**
  - **Impact on Consumers:**
    - The recent hike of Rs 50 per cylinder in March 2023 translates to a 4.75% increase in the price of a 14.2 kg domestic LPG cylinder in Delhi.
    - Taxes and dealer commissions **contribute to only 11% of the cylinder's retail price, with almost 90% attributed to the cost of LPG itself**, unlike petrol and

diesel prices where taxes dominate.

## What are Potential Solutions for Reducing Dependency on Fuelwood?

- **Promoting Renewable Energy Sources:** Encouraging the adoption of renewable **energy sources such as solar, wind, and hydropower** can help reduce reliance on fuelwood.
  - Many countries have implemented policies and incentives to promote the use of renewable energy, such as **feed-in tariffs, tax credits, and subsidies.**
- **Improved Cookstoves:** Traditional stoves waste a lot of heat. Distributing **Improved Cookstoves (ICS)** that burn fuelwood more efficiently can significantly reduce consumption.
  - For example, projects in Nepal have shown that ICS use can cut fuelwood needs by half.
  - The **Global Alliance for Clean Cookstoves**, a public-private partnership, has worked to distribute over 80 million clean and efficient cookstoves in developing countries since its inception in 2010.
- **Alternative Fuels:** Promoting the use of alternative fuels such as **biogas, pellets, or briquettes** made from agricultural waste can reduce the demand for fuelwood and provide a more sustainable energy source.
- **Sustainable Forest Management Practices:** Ensuring sustainable forest management practices can help maintain a **balance between fuelwood extraction and forest regeneration**, reducing the environmental impact of fuelwood consumption.

### **Drishti Mains Question:**

Q. How do environmental and social consequences of fuelwood dependency intersect with the factors driving high LPG prices in India?

## UPSC Civil Services Examination, Previous Year Questions (PYQ)

### **Prelims**

Q. According to India's National Policy on Biofuels, which of the following can be used as raw materials for the production of biofuels? (2020)

1. Cassava
2. Damaged wheat grains
3. Groundnut seeds
4. Horse gram
5. Rotten potatoes
6. Sugar beet

Select the correct answer using the code given below:

- (a) 1, 2, 5 and 6 only  
(b) 1, 3, 4 and 6 only  
(c) 2, 3, 4 and 5 only  
(d) 1, 2, 3, 4, 5 and 6

Ans: (a)

### **Mains**

Q. Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs)." Comment on the progress made in India in this regard. (2018)

