

DAILY CURRENT AFFAIRS ANALYSIS



LAKSHYA ACADEMY®

24 JULY 2025

1 - Impact on Socio-Ecological Systems Caused by the Rising Cost of LPG:

GS III

Indian Economy

- **Which aspects of the study stand out as the most important?**
- Dependence on woods for Fuelwood Because there is a lack of access to alternate cooking fuels, the local communities in Jalpaiguri are heavily dependent on woods for the provision of fuelwood.
- Due to financial constraints, the price of commercial LPG cylinders, which may be found at more than Rs 1500, is believed to be extravagant for a great number of homes, particularly those that fall below the poverty line.
- Initiatives of the Government: Initially, the shift from fuelwood to LPG was made easier by government programmes such as the Pradhan Mantri Ujjwala Yojana (PMUY). However, the following increase in the cost of LPG presented a hurdle.
- Due to the expensive expense of refilling their cylinders, many households only do so occasionally, despite the fact that attempts are being made to boost the penetration of LPG in rural areas.
- In terms of environmental and social implications, reliance on fuelwood is a factor that contributes to the degradation of forests and raises the possibility of conflicts between humans and wildlife, particularly in the case of
- The consumption of fuelwood continues to put the health of forests, the habitats of wildlife, and the livelihoods of local people in jeopardy.
- Sustainable Alternatives: The West Bengal Forest Department and Joint Forest Management Committees are working together to promote sustainable forest management through their collaborative efforts.
- approaches to management.
- The planting of saplings with a high fuelwood value in villages, the promotion of efficient cooking stoves, the optimisation of shade tree density in tea plantations, and other initiatives are among the initiatives.
- in order to facilitate the participation of several stakeholders in resource governance.
- Solutions That Are Acceptable in the Local Community It is of the utmost importance to create alternatives to fuelwood that are both locally acceptable and sustainable in order to protect forests, animals, and livelihoods.
- When it comes to the development and adoption of alternate cooking fuels and forest conservation activities, community involvement and engagement with important stakeholders are absolutely necessary.

- **Is the Government Attempting to Encourage the Use of LPG?**

- In an effort to boost the usage of LPG in rural households, the government of India has made the following efforts:
- A programme called Rajiv Gandhi Gramin LPG Vitruk was initiated in 2009 with the purpose of increasing the distribution of LPG in rural regions.
- In 2015, the 'PAHAL' system was implemented, which included the beginning of direct benefit transfers for LPG.
- In 2016, we successfully implemented the 'Give it Up' programme as well as direct home-refill deliveries.
- A programme called the Pradhan Mantri Ujjwala Yojana (PMUY) was launched in 2016 with the goal of installing LPG connections in 80 million families who were below the poverty line.
- In addition, the programme offers a discount of Rs 200 for each 14.2-kg cylinder, which would be increased to Rs 300 in October of 2023.
- Nevertheless, in spite of these efforts, it was projected that the cost of LPG in India was the highest among these 54 countries in 2022, with prices hovering around ₹300 per litre.
- The cost of liquefied petroleum gas (LPG), petrol and diesel fuel in India is among the finest in the world. Despite the fact that there are discussions regarding external sources and increasing costs worldwide, the actual impact
- due to disparities in purchasing power and affordability, is higher in India than in other countries.
- The price of fuel in India is the third highest in the world when measured in purchasing power parity (PPP) dollars, with Sudan and Laos being the only countries with higher prices.
- The national price of LPG in India is the highest in the world. India has the eighth highest costs for diesel in the world.
- Based on the findings of the ACCESS survey that was carried out by the Council on Energy, Environment, and Water in 2014-2015, it was discovered that the cost of LPG is the most significant obstacle to its widespread adoption.
- ongoing use in rural poor homes.
- Because of this, over 750 million people in India rely on solid cooking fuels on a daily basis. These fuels include wood, dung, agricultural residues, coal, and charcoal.
- When it comes to health risks, as well as socioeconomic and environmental repercussions, solid cooking fuels are associated with a multitude of implications.

- **What is the Cause of India's Exorbitant LPG Prices?**

- **A Reliance on Foreign Imports:**

- Since more than sixty percent of India's need for LPG are satisfied by imports, the country is highly dependent on these imports.
- In the country, the pricing dynamics of LPG are greatly influenced by the fact that the country is dependent on imports.
- Saudi Arabia's average Contract Prices (CP) for propane and butane are a significant factor in determining the prices of LPG in India.

- LPG is a mixture of gases, with butane and propane making up the majority of the mixture, with the amount of butane being severely restricted.
- Saudi Aramco is the entity that determines the CP, which is the international price for the trading of LPG.
- A significant factor that contributed to the increase in the cost of LPG was the fact that the average Saudi CP went from USD 454 per tonne in FY20 to USD 710 in FY23.
- Analysts believe that this increase can be attributed to an increase in demand from Asian markets, particularly for petrochemicals, which are a sector in which propane is an essential feedstock.

• **Influence of Imports:**

- India's dependence on imported LPG is highlighted by the fact that the country imported 8.7 million tonnes of LPG during the period of April to September 2022, despite having a total consumption of 13.8 million tonnes.
- The pricing approach for liquefied petroleum gas (LPG) in India is determined by the movements in worldwide markets, particularly in the Middle East, which is India's most important source of LPG.

• **Repercussions for Customers:**

- As a result of the recent increase of Rs 50 per cylinder in March 2023, the price of a home LPG cylinder weighing 14.2 kilogrammes in Delhi has increased by 4.75 point five percent.
- Taxes and dealer commissions account for only 11% of the retail price of the cylinder, with approximately 90% of the price being attributable to the cost of LPG itself. This is in contrast to the situation with petrol and diesel prices, where taxes are the primary factor.
- What are some possible solutions that may be implemented to lessen our reliance on fuelwood?
- **Fostering the Adoption of Renewable Energy Sources:** Fostering the adoption of renewable energy sources such as solar, wind, and hydropower can assist in reducing reliance on fuelwood.
- Feed-in tariffs, tax credits, and subsidies are some of the policies and incentives that have been established by a number of nations in order to encourage the utilisation of renewable energy sources.
- The usage of ICS, for instance, has been demonstrated to reduce the amount of fuelwood required by fifty percent in Nepal.
- In developing nations, the Global Alliance for Clean Cookstoves, which is a public-private partnership, has been working to distribute more than 80 million cookstoves that are both economical and environmentally friendly.
- from the year 2010, when it was first established.
- **Alternative Fuels:** Increasing the use of alternative fuels, such as biogas, pellets, or briquettes derived from agricultural waste, can help reduce the demand for fuelwood and other fossil fuels.
- a source of energy that is more environmentally friendly.
- **Sustainable Forest Management techniques** Ensuring that sustainable forest management techniques are in place can assist in the preservation of a good equilibrium between the extraction of fuelwood and forest

- reforestation, which lessens the influence that the consumption of fuelwood has on the environment.

Source → The Hindu

2 - Improvements in the rupee:

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Indian Economy

- **How is the journey of the Indian Rupee over the past decade going?**
- From 2004 to 2014, the value of the rupee decreased by 26.5%, going from Rs 44.37 to Rs 60.34 in relation to the US dollar.
- In comparison to the United States dollar, the value of the rupee has decreased by 27.6%, going from Rs 60.34 to Rs 83.38 over the course of the period between 2014 and 2024.
- When referring to the foreign exchange market, the terms "appreciation" and "depreciation" of currency are used to describe changes in the value of a currency in comparison to other currencies.
- The value of the rupee fell by 32.2% (from 133.77 to 90.76) according to the NEER for a basket of 40 currencies between the years 2004 and 2024, and by 40.2% (from 139.77 to 83.65) according to the NEER for a basket of six currencies during the same time period.
- In comparison to the United States dollar, the average exchange rate for the rupee decreased by 45.7%, going from Rs 44.9 to Rs 82.8.
- As a result, the rupee has had a smaller depreciation against the currencies of India's key trading partners between the years 2004 and 2024 in comparison to its depreciation simply versus the United States dollar.
- Additionally, the trade-weighted REER of the rupee has increased during the past 20 years, indicating that the rupee strengthened between the years 2004-2005 and 2023-24. This is true for both the 36-currency basket and the 40-currency basket.
- In actual terms, the rupee has risen over time, and it has remained at 100 or above for the most of the time during the course of the past ten years.
- **A rate of exchange is what exactly?**
- The rate at which one currency can be acquired in exchange for another currency is referred to as the exchange rate. The value of one currency expressed in terms of another currency is represented by this variable.

- The amount of one currency that is required to purchase one unit of another currency is the type of currency that is commonly used to express exchange rates.
- Various types:
- Governments or central banks are responsible for determining the value of their currency in respect to other currencies and then maintaining that value through the purchase and sale of their own currency on foreign exchange markets. This is referred to as a fixed exchange rate.
- The value of a currency is established by the foreign exchange market on the basis of supply and demand. This is known as a floating exchange rate. This method is used by the majority of the world's main currencies.
- The term "managed float" refers to a hybrid of fixed and floating exchange rates in which governments make occasional interventions to maintain the value of their own currencies.

• **Aspects That Influence Currency Exchange Rates:**

- **Interest Rates:** A country's interest rates have a tendency to attract foreign investment, which in turn increases the demand for that country's currency and strengthens the exchange rate of that country.
- **Inflation:** When a nation's inflation rate is higher than that of its trading partners, the value of that nation's currency declines since its purchasing power is lower to begin with.
- **Economic Growth:** A robust and expanding economy contributes to the development of confidence in a nation's currency, which ultimately results in a more favourable exchange rate.
- The volatility of a country's political system can discourage foreign investment and cause the value of the country's currency to decline.
- One of the most important factors is the fundamental concept of supply and demand, which plays a significant influence. The value of a particular currency's exchange rate increases when there is a greater demand for that currency: more people want to buy it.

- The effective exchange rate (EER) of a currency is calculated by taking the weighted average of its exchange rates against other currencies and adjusting it for inflation and trade competitiveness with other currencies.
- These currency weights are computed from the percentage of India's total foreign commerce that each individual country contributes to the total.

• **Influence on the Power of a Currency through:**

- One of the factors that determines the strength or weakness of a currency is the exchange rate of that currency with the currencies of all of the trading partners.
- Therefore, the strength or weakness of the Indian Rupee is a result of its exchange rate not just with the United States dollar but also with other currencies from across the world.
- The "Effective Exchange Rate" (EER) of the rupee would use a basket of currencies representing the most important trading partners of the country. In this scenario, the currency would be exchanged against the EER.

- **A Few Varieties of Effective Exchange Rates (EER):**

- The Nominal Effective Exchange Rate (NEER) is a straightforward average of the bilateral exchange rates that exist between the domestic currency and the currencies of key trading partners. All of these exchange rates are weighted according to the corresponding trade shares.
- The Net Effective Exchange Rate (NEER) is a metric that evaluates the overall strength or weakness of a currency in comparison to a basket of other currencies, unaffected by inflation.
- These NEER indices are calculated with a base value of 100 and a base year of 2015-16 as their starting point.

- **There are two different baskets of currencies that the Reserve Bank of India has created NEER indexes of the rupee against. These baskets are as follows:**

- A trade-weighted average rate is used to determine the rate at which the rupee can be exchanged for a basic currency basket. This basket includes the United States dollar, the euro, the Chinese yuan, the British pound, the Japanese yen, and the Hong Kong dollar.
- A larger basket of forty different currencies from nations that account for approximately eighty-eight percent of India's annual trade flows is something that this basket encompasses.
- REER stands for the real effective exchange rate.
- The difference in inflation rates between the home economy and its trading partners is taken into account by REER, which then modifies NEER accordingly. Changes in the relative price levels of products and services are reflected with this indicator.
- A more precise measurement of a currency's ability to compete in international trade is provided by the REER, which takes into account fluctuations in price levels.
- The REER is determined by dividing the NEER by a price deflator for the domestic economy, such as the Consumer Price Index, and then multiplying the result by 100.

- **What are the repercussions that the depreciation of the Indian currency would have on the Indian economy?**

- **Impacts On the Positive:**

- Exports are boosted because Indian exports become more affordable for purchasers from other countries, which may lead to an increase in demand and an increase in earnings from exports.
- Inward Remittances: When the rupee is weaker, it will be easier for workers on the other side of the world to send more rupees back home when they convert their earnings from foreign money.
- This has the potential to improve India's discretionary income.
- adverse effects include:
- Higher Import Costs: Imported goods, including essential items like oil and machinery, become more expensive.
- This can lead to inflationary pressures, where the general price level of goods and services rises, impacting the common man's purchasing power.
- Costlier Foreign Debt: If India has borrowed money in foreign currencies, a weaker rupee means it has to pay back more rupees to settle the debt.

- This can strain the government's finances.
- Discourages Foreign Investment: A depreciating rupee can be seen as a sign of economic instability, potentially discouraging foreign investors from investing in India.

Source → The Hindu

3 - Liveable Planet Report by World Bank:

GS III

International Relations

- **What are the Key highlights of the Reports?**
- "Recipe for a Livable Planet" provides a global strategic framework for reducing the agrifood system's impact on climate change.
- It outlines how the world's food production can significantly lower greenhouse gas (GHG) emissions while continuing to ensure global food security.
- **Potential and Benefits of Agrifood System Reform:**
- Reduction Potential: The global agrifood system can decrease nearly a third of the world's GHG emissions through feasible and accessible measures.
- These measures will enhance food security, increase the climate resilience of the food system, and protect vulnerable communities during this transition.
- **Agrifood's Role in Climate Change:**
- Contribution to Emissions: Agrifood contributes roughly one-third of global GHG emissions, more than all of the world's heat and electricity emissions combined.
- Main Contributors of Emissions: About three-quarters of these emissions originate from developing countries, necessitating targeted mitigation actions as per the specific needs of the region.
- Emissions from Food Value Chain: Addressing emissions from the entire food value chain, including land use changes, is critical as over half of the emissions stem from beyond the farm level.

- **What are the Big Opportunities Reports Highlighted?**
- **Economic and Environmental Benefits:**
- **Untapped Potential:** The agrifood sector offers significant, cost-effective opportunities for climate action, including drawing carbon from the atmosphere through enhanced land management.
- **Return on Investment:** The financial outlay required to halve agrifood emissions by 2030 would yield substantial returns, greatly outweighing the costs with beneficial impacts on health, the economy, and the environment.



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- **Opportunities for Action in Countries and Globally:**

- **Role of High-Income Countries:** These countries should reduce their agrifood energy demands, support lower-income countries through funding and technology transfer, and modify consumer diets away from high-emission foods.
- **Middle-Income Countries' Role:** These countries can achieve significant emissions reductions through better land use management and agricultural practices.
- **Low-Income Countries' Role:** Focus on sustainable growth without the burden of high-emission infrastructures, leveraging strategies like agroforestry to boost productivity and resilience.

- **Actions at the Country and Global Levels:**

- **Investment and Policy Initiatives:** Enhance private sector investment in agrifood mitigation, repurpose subsidies, and implement policies favoring low-emission technologies.
- **Innovation and Institutional Support:** Use digital technologies for better emissions data and invest in innovations to transform the agrifood system, ensuring inclusive stakeholder participation for a just transition.

- **What are the Key Highlights Related to India in the Report?**

- **India's Contribution to Global Agrifood Emissions:**

- The report identifies India as one of the top 3 countries in terms of total annual agrifood system emissions, along with China, and Brazil.

- **Cost-Effective Mitigation Potential in India:**

- The report notes that countries like India, around 80% of the technical mitigation potential in agriculture could be achieved by adopting cost-saving measures alone.
- This represents a major opportunity for India to reduce emissions while also improving agricultural productivity and incomes.

- **Key Mitigation Options for India:**

- Key mitigation options for India include better livestock feeding (Harit Dhara, a nti-methanogenic feed) and breeding, fertiliser management, and better water management in water intensive crops.
- A marginal abatement cost curve for India's agriculture sector shows these are some of the most cost-effective interventions India can pursue to cut agrifood emissions substantially by 2030.
- India needs to curb methane emissions from agricultural production.
- Adopting practices like intermittent irrigation and promoting varieties that emit less methane provide mitigation opportunities.

- India has high rates of food loss and waste. As per Food Waste Index Report 2021, Indian households generate 50 kg of food waste per capita per year.
- Reducing food loss and waste can provide another high-impact, cost-effective avenue for India.
- Need for International Support: India will need international financial and technical support to realise its agrifood mitigation potential.

• **Way Forward:**

- **Investments:** Governments and businesses should de-risk private climate investments in agrifood through blended finance, corporate accountability, and expanding carbon markets.
- **Incentives:** Policymakers should implement measures to accelerate agrifood system transformation, such as repurposing harmful subsidies, and ensuring policy coherence.
- **Information:** Improving GHG monitoring, reporting, and verification (MRV) systems using digital technologies can help unlock climate finance for the sector.
- **Innovation:** Expanding cost-effective mitigation technologies and increasing R&D investments can drive the future transformation of agrifood systems.
- **Institutions:** International frameworks, national policies, and subnational initiatives must facilitate agrifood mitigation opportunities in a coordinated manner.
- **Inclusion:** The transformation must ensure a just transition by protecting vulnerable groups like smallholder farmers through stakeholder engagement, benefit sharing and social empowerment.

Source → The Hindu

4 - Side-Effects of Covid-19 Vaccine:

GS II

Health related issues

• **What is Thrombocytopenia Syndrome?**

• **About:**

- TTS is also referred to as vaccine-induced prothrombotic immune thrombocytopenia (VIPIT) or vaccine-induced immune thrombotic thrombocytopenia (VITT).
- This rare syndrome has been observed in individuals who have received Covid-19 vaccines utilising adenoviral vectors.
- It is generally believed to be caused by an immune reaction triggered by the adenovirus vector used in these vaccines.

- Adenoviruses are non-enveloped, double-stranded DNA viruses which are considered excellent vectors for delivering target antigens to mammalian hosts because of their capability to induce both innate and adaptive immune responses.
- **Symptoms:**
 - TTS is linked to a variety of symptoms such as difficulty breathing, chest or limb pain, small red spots or bruising beyond the injection site, headaches, numbness in body parts, and more.
 - Thrombosis refers to the formation of blood clots, while thrombocytopenia is characterised by a low platelet count.
- **Risk- Benefit Analysis:**
- **Risk:**
 - TTS most commonly occurs in healthy young women around thirty years old at a low frequency of about one to two cases per 100,000.
 - At a general population level, it is estimated to occur at only about two to three cases per million vaccinated people.
 - The annual risk of TTS is still much lower than the annual risk of dying in a road accident.
- **Benefit:**
 - Covishield has shown over 80% protection against severe COVID-19 and over 90% protection against death in various studies, even during the Delta wave.
 - For a 50% chance of getting Covid-19 and a 0.1% risk of death, the vaccine provides a significant mortality benefit, outweighing the risks by far.
 - It has not only reduced disease severity and minimised immediate suffering and stress on healthcare systems but also to lower the risk of long-term disabilities and premature heart attacks and strokes.
 - This risk was noted early in the pandemic, before vaccines were available, and vaccination has been shown to reduce this risk.
- **Other Rare Side Effects of Covid-19 Vaccines:**
 - A study of 99 million people found that cases of Guillain Barre Syndrome, myocarditis, pericarditis, and cerebral venous sinus thrombosis (CVST) were at least 1.5 times higher than expected after receiving mRNA and ChAdOX1 (or Covishield) vaccine for Covid-19.
 - The study confirmed that these illnesses were classified as 'rare' side effects following the vaccination for Covid-19.
 - CVST refers to cerebral venous sinus thrombosis, which is the presence of blood clots in the brain.
 - Guillain-Barre syndrome is an immune system disorder that attacks the nerves, causing muscular damage and requiring prolonged treatment.

- Myocarditis and pericarditis are conditions involving inflammation of the heart tissue.
- **What were the Regulations and Concerns Related to Covid-19 Vaccination in India?**
- **Regulations Related to Covid-19 Vaccines in India:**
 - India has used nearly 1.75 billion doses to vaccinate approximately 80% of its vaccinated population.
 - Covid-19 vaccines were administered without the completion of phase-3 trials, and the manufacturers did not have complete information on possible short-term or long-term side effects or fatalities.
 - E.g. The Phase 3 protocol for Covaxin (by Bharat Biotech) was approved before the completion of Phase 2, and the final vaccine candidate was chosen without considering the Phase 2 trial data.
 - The Corbevax vaccine (by Biological E) received emergency use authorisation from the Drug Controller General of India (DCGI) for vaccinating 12-14-year-old children.
- **Concern Related to Covid-19 Vaccines:**
 - In March 2021, Several European countries temporarily paused the use of AstraZeneca's vaccine due to reported cases of blood clotting.
 - The World Health Organization stated that TTS was being reported in some cases after vaccinations with Covishield and Vaxzevria, but emphasised that the risk appears to be very low based on available data.
 - European nations, UK, USA, and Australia halted the use of Covishield due to TTS reports, despite the benefits outweighing the risks.
 - They had enough mRNA (like Pfizer-BioNTech and Moderna Covid-19) vaccines available, which were more immunogenic and not linked to TTS, although cases of non-fatal myocarditis had been seen.
 - In 2023, the WHO included vaccine-induced immune thrombotic thrombocytopenia (VITT) in its classification of thrombosis with thrombocytopenia syndrome (TTS).
- **India's Stand:**
 - Before the Covid-19 vaccines were rolled out in India, the Indian government issued a fact sheet in January 2021 cautioning the use of Covishield for individuals with low platelet counts.
 - In May 2021, the Indian government reported 26 potential cases of blood clots related to the Covishield vaccine, with a rate of 0.61 cases per million doses.
 - The government maintained that the risk is minimal and that Covishield has a positive benefit-risk profile. No such events were reported for the indigenous vaccine, Covaxin (by Bharat Biotech).
 - The Ministry of Health and Family Welfare, GoI also noted that the risk of blood clotting is lower in individuals of South and Southeast Asian descent compared to those of European descent.

Source → The Hindu



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