Making Carbon Pricing Fair: Protecting the Poor While Tackling Climate Change in India

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Introduction

India has pledged to reach net-zero emissions by 2070, a target that requires fundamental shifts in energy use and economic structures. A carbon price—putting a monetary cost on greenhouse gas emissions—is a key tool to drive this transition. It sends the right signals to producers and consumers, pushing the economy towards cleaner energy and technology.

But carbon pricing also raises concerns. It can make fuel, electricity, and everyday goods more expensive, disproportionately affecting low-income households that already spend a large share of their income on basic needs. As India considers adopting market-based climate tools like carbon taxes or emissions trading, it must ensure that these policies are not only effective—but also equitable.

This brief outlines why carbon pricing can be regressive, how it can be redesigned to protect the poor, and what lessons India can draw from other countries' experiences.

Why Carbon Pricing Can Be Regressive

Carbon pricing affects poor households more severely for two key reasons:

1. **Higher Share of Energy Costs**: Low-income families spend a larger portion of their income on fuel, electricity, and cooking gas. Even modest price increases can strain their already tight budgets.
2. **Indirect Inflation Effects**: Carbon pricing raises input costs across the economy. That means more expensive food, transport, and manufactured goods. For example, higher diesel prices affect transport costs, which ripple down to vegetable prices in rural mandis.
3. **Rural-Urban Divide**: Rural households rely more on kerosene, diesel pumps, and biomass. They also have less access to clean energy alternatives. Urban households may find it easier to shift to electric cooking or metro systems, while rural areas may face price hikes with few substitutes.

Without corrective policies, carbon pricing risks widening existing inequalities and triggering public opposition—undermining both climate and development goals.

Why the Poor Bear a Higher Burden

Drawing from the study and broader literature, here are the main reasons the poor in India **face higher net costs than benefits** from carbon pricing:

1. **Higher Energy Cost Share**

- Energy (electricity, LPG, kerosene, transport fuels) takes up a **greater share of consumption** for poor households
- A 2019 IMF study estimates that under a $50 carbon tax, the **bottom 20% of Indian households** bear a tax burden close to **3.4% of consumption**, almost as high as that for the rich — but with **far less capacity to absorb it**

2. **Lower Access to Substitutes**
   - The poor **lack access to cleaner cooking fuels** or **public transport infrastructure**
   - Transitioning away from coal, diesel, and biomass without alternatives **cuts into essential energy access**
3. **Informal & Fossil-Dependent Jobs**
   - Many coal workers, transport operators, and industrial laborers work in the **informal sector**, without retraining or social security
   - A poorly managed coal phaseout risks **deepening structural unemployment** in states like Jharkhand, Chhattisgarh, and Odisha
4. **Lower Investment Capacity**
   - Wealthier households and firms can adopt solar rooftops, EVs, energy-efficient appliances — poor households cannot
   - Without capital or credit, the poor can't benefit from long-term energy savings
5. **Regional Inequities**
   - Solar and wind potential is **unevenly distributed** — Southern and Western regions benefit more
   - Northern and Eastern states may be left behind in clean infrastructure investments, deepening inter-regional inequality.

A 2022 study by the IMF show that while only a small share (less than 5%) of Indian households derive their labor income from energy-intensive sectors, the economic loss to those directly affected can be significant. On average, these households would experience a reduction equivalent to 11% of their initial consumption, with the top 10% most-affected households facing losses of up to 23%.

Despite these concentrated impacts, when combining the effects of both higher consumer prices and reduced labor income, the **average burden would be 3.4% of initial household consumption**, with **lower-income households relatively less affected,** but almost as high as the rich who would face an average 3.5% of initial consumption. While this makes India one of the few progressively taxed states in the developing economies, it is not substantial to offset the hardships faced by vulnerable groups without well-targeted compensation schemes or dividend transfers accompanying the reform.

Policy Tools to Make Carbon Pricing Fair

Several tools are available to cushion the blow and ensure fairness:

- **Revenue Recycling**: Governments can redistribute the carbon tax revenues as **direct cash transfers** or **rebates** to households. This can take the form of a **universal climate dividend** or be **targeted to poor and rural households**, similar to how LPG subsidies are structured today.
- **Public Investment**: Carbon revenues can fund **clean public transport**, **rural electrification**, and **green jobs**. Investing in solar micro-grids, for instance, can offset fuel cost burdens and build long-term resilience.
- **Targeted Tax Relief**: Essentials such as food and basic energy can be temporarily exempted or receive compensatory subsidies to avoid inflation shocks. Smart targeting using Aadhaar-linked databases can ensure efficiency.

These measures ensure that while prices signal the environmental cost of carbon, they do not push people into poverty.

The 2022 IMF study suggested a carbon tax of $50 per ton in India could raise 2.5% of GDP in fiscal revenues. Targeted transfers to the poorest 20% of households could be implemented at just 4.8% of total revenues.

- Compensating **the poorest 50%** would require **less than a third** of carbon tax revenues.
- Covering **labor income losses entirely** for impacted households would require **less than 10%** of the revenue.

Examples from Other Countries

- **Canada** introduced a carbon tax with direct **rebates to households**. Most low- and middle-income families received more in rebates than they paid in carbon taxes.
- **South Africa**, while implementing its carbon tax, offered **transitional exemptions for energy-intensive sectors** and included **revenue earmarking** for green projects and social spending.
- **India-focused studies**: A 2022 simulation by the **Council on Energy, Environment and Water (CEEW)** found that a carbon price of ₹1,500 per tonne could significantly reduce emissions while using **just 30% of revenues** for **targeted transfers** to fully offset poor households' losses.

Similarly, a **NIPFP study** found that carbon pricing can be made progressive if paired with redistribution policies and smart exemptions.

Lessons from Australia's Carbon Pricing Failure

- Despite meeting goals of **efficiency and equity**, Australia's carbon pricing system (2012–2014) failed due to poor **political communication** and opposition mobilization.

- This illustrates that **technical soundness** alone is not enough—**public trust and communication strategy** are essential for policy survival.

Conclusion

India cannot afford to ignore carbon pricing if it is serious about climate leadership. But nor can it afford to ignore its poor.

The way forward lies in **carefully designed, pro-poor carbon pricing policies**—those that tax emissions but cushion their impact on livelihoods. With smart redistribution, India can reduce emissions, protect its most vulnerable citizens, and uphold climate justice.

A climate policy that is fair will also be more durable, more popular, and ultimately—more successful.

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