World view

By Vijaya Ramachandran

Blanket bans on fossil fuels hurt women

Better legislation will help all without significantly contributing to climate change.

If you want to learn how dangerous cooking can be, ask my cousin. When she was three, growing up in the small town of Saram, India, she knocked over her mother's kerosene stove, scalding herself badly. Her face was scarred for the rest of her life.

The dangers of some fuels aren't always so obvious. About 2.6 billion people, mostly in lower-income countries, experience energy poverty — the lack of access to clean fuels — and cook on open fires or stoves using kerosene, coal, wood, animal waste or other forms of biomass.

The World Health Organization (WHO) estimates that 3.8 million people die prematurely each year from illnesses linked to household air pollution, often caused by these fuels. Cooking with biomass results in more deaths than tuberculosis, malaria and HIV/AIDS combined. I study solutions to energy poverty in my job as the director for energy and development at the Breakthrough Institute, an environmental-research centre in Berkeley, California. I often think of my cousin — how, even if she hadn't knocked over that burner, it would still be harming her.

The impact of these fuel sources is especially dire for women and girls because they do most of the cooking and household chores. A study in India found that women are more likely to develop health conditions due to indoor air pollution during cooking; and poorer and less educated women are more likely to develop them than are their better-off counterparts (R. Ranjan and K. K. Bhadra *Indian J. Hum. Dev.* **13**, 294–307; 2019). Women lose time, security and income because they must gather fuel; girls who might otherwise go to school go out to collect wood or cow pats.

That the responsibility of cooking falls heavily on women is already misogyny; an added insult is the public-health crisis linked to that chore in many low-income countries.

Millions of women have been protected by turning to cleaner fuels, in particular liquefied petroleum gas (LPG), prepared from refined petroleum. For now, LPG cooking stoves are probably the cleanest, most scalable solution to improve the health of women and reduce deaths from indoor air pollution in poor countries.

But LPG is a fossil fuel and, although it has few local effects on air quality, it does emit greenhouse gases when burnt. European countries such as Germany — a major consumer of coal and natural gas — and Norway, one of the world's largest exporters of natural gas, are seeking to ban the financing of all fossil-fuel projects in low- and middle-income countries entirely. This puritanical, one-size-fits-all approach is bad for the climate and overwhelmingly leaves women breathing in dangerous smoke from dirty cooking fuels. The West needs to get a grip and devise a more sensible strategy to solve this public-health crisis.

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Last month, the United Nations published a report on the progress made towards achieving the Sustainable Development Goals, including SDG7 (see go.nature.com/3y6i), which aims to ensure affordable, reliable, sustainable and modern energy for all by 2030. It makes clear that the world is falling far short of the investments necessary to reach this goal. About US$4.5 billion a year is needed to achieve universal access to clean fuels for cooking (this estimate includes supplying infrastructure, such as LPG stoves). Rich countries have so far coughed up about $130 million a year.

A clean-cooking metric that incorporates cooking fuels, thus providing better data for policymakers, could speed progress. The WHO provides country-level estimates of clean-fuel use, but there are years when no data are available for some countries. Some national surveys do not ask what type of stove households use. A proper metric would measure access to LPG fuel or electric stoves for every low- and middle-income country through a best-practices survey. It could measure what share of cooking is done with LPG and how much is done with biomass.

National statistics agencies must be funded to collect these data at the household level every year. Information from one such project, the US Demographic and Health Surveys Program, has shown the value of girls' education and access to contraception and basic health services.

More crucial data will probably come from an ongoing randomized controlled trial of LPG stoves and fuel distribution in 3,200 households in India, Guatemala, Peru and Rwanda (T. Clasen *et al. Environ. Health Perspect.* **128**, 47008; 2020). Selected households receive LPG stoves and an 18-month supply of free LPG. Health outcomes such as children's birth weight and incidence of severe pneumonia and stunting are measured; older women are monitored for high blood pressure. Kitchens are checked for particulate matter, carbon monoxide and black carbon, which results from the low-temperature burning of biomass. I hope policymakers pay attention to this best-practice research.

Policymakers from rich countries might say they support women's empowerment, but to me they seem more interested in simplistic climate mitigation — and coercing smaller nations to make cuts and compromises — than in improving the lives of poorer women. The irony is that clean cooking fuels are much better for the environment than standard fuels. Black carbon, although a short-lived pollutant, has a warming impact on the climate many times greater than that of carbon dioxide.

Pious, performative, broad-brush bans on fossil fuels help no one. A more intelligent, data-led approach is needed to better protect the climate alongside vulnerable people in developing nations.

Vijaya Ramachandran is the director for energy and development at the Breakthrough Institute in Berkeley, California.
e-mail: vijaya@thebreakthrough.org

STEPHANIE DONOHOE