



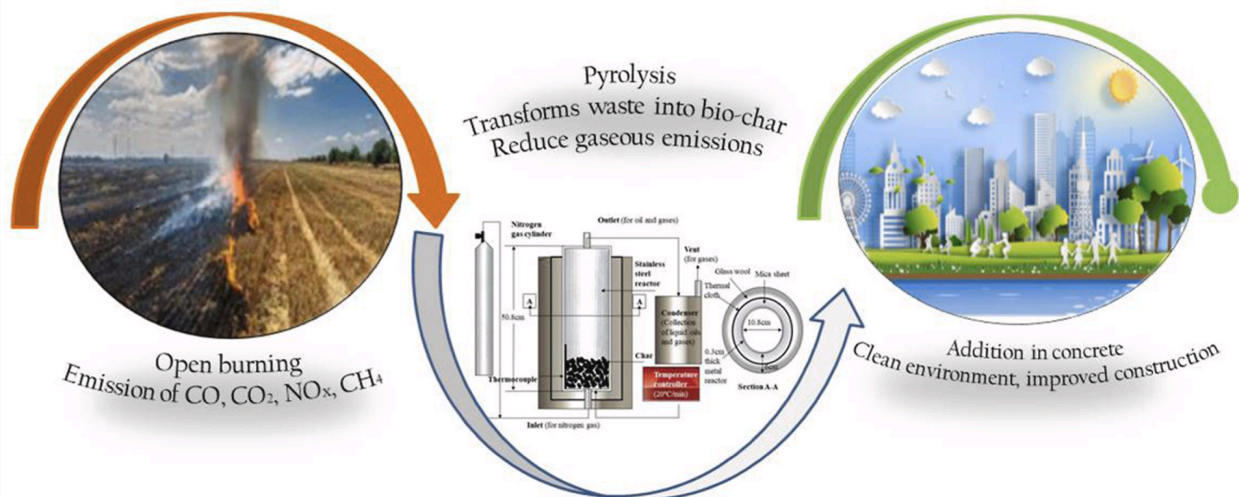
# Open Burning Reduction through Holistic Energy Solutions

*with focus on low /no cost start up so that all 8 billion people can benefit quickly from lower fuel costs, energy costs and increased income from better utilization of existing resources*

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## Key Points:

- 30% of total greenhouse gas emissions are from household food consumption
- ...the global crop residues open burning... were assessed to contribute 12–14% towards global warming potential by the global crop residues open burning
- Pyrolysis is one of the most cost-effective, feasible and environmental friendly biomass-to-energy conversion processes
- Unlike....open burning, where air polluting compounds, i.e. H<sub>2</sub>S, SO<sub>2</sub>, and NH<sub>3</sub>, are emitted pyrolysis is...a technology for biomass reuse in line with global net zero emission targets





According to new data developed by the [Food and Agriculture Organization](#), with assistance from the [Food Climate Partnership](#), the total emissions from household food consumption account for the equivalent of [1.3 billion tonnes](#) of carbon dioxide each year. That's roughly 8% of the global food system's total footprint — [around 16 billion tonnes](#) — which in turn accounts for nearly one-third of total greenhouse gas emissions.

A household's carbon footprint related to food consumption is largely driven by its cookstoves and fuels used for cooking. Along with Tanzania, [one-third](#) of the global population relies on biomass — wood, charcoal, or animal dung — or highly polluting fuels such as kerosene for household cooking or lighting needs.

Burning charcoal and these other “dirty” cooking fuels indoors generates soot, particulate matter, and household air pollution that is responsible for nearly [3.8 million](#) premature deaths and tens of millions of injuries and illnesses each year.(1)

Crop residues are subjected to open burning in Indonesia. These farming practices were studied to determine the proportion of open burned and their contribution to air pollution based on crop and air pollutant specific emission factors. On an annual basis, it was estimated that 45 million tonnes of crop residues are open burned. This leads to emission of greenhouse gases and toxic pollutants. On an average, CO<sub>2</sub> and CO dominate the overall emissions with 90% and 8% respectively. The remaining 2% are contributed by CH<sub>4</sub>, SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, N<sub>2</sub>O, NMVOC and particulate matter. Climate charging emissions were assessed to contribute 12–14% towards global warming potential by the global crop residues open burning (2)

1. <https://news.climate.columbia.edu/2022/11/14/traditional-cookstoves-fueling-a-health-and-climate-crisis/>
2. Andini, Ade, et al. “Impact of Open Burning of Crop Residues on Air Pollution and Climate Change in Indonesia.” *Current Science*, vol. 115, no. 12, 2018, pp. 2259–66. *JSTOR*, <https://www.jstor.org/stable/26978589>. Accessed 7 July 2024.