Practical Solutions for Stubble Burning

What is the issue?

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- Incidents of stubble burning following the harvest of paddy crop in Punjab and Haryana cannot be averted by imposing fines.
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- Instead, the issue requires long-term vision and strategic policy interventions.
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Why Punjab and Haryana contribute to stubble burning?

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- In the 1960s, wheat-paddy crop rotation was encouraged in Punjab and Haryana to make India self-sufficient in food grain production.
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- Large public investments in irrigation and adoption of high yielding varieties under the Green Revolution helped achieve the goal and make the nation food secure.
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- The share of paddy (rice) in the gross cropped area in Punjab has increased from 6.8% in 1966-67 to almost 36.4 % in recent years, while it has increased from 4.97% to 20% in Haryana.
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- Besides, Punjab enacted a water conservation law in 2009 which mandates paddy sowing within a notified period (sometime in June instead of the earlier practice in May).
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- A shorter period of sowing days prohibits transplantation before a notified date, which in turn limits the window available for harvesting paddy to between 15 and 20 days.
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- As a result, farmers who are pressed for time to sow wheat and maintain

crop yield find stubble burning to be an easy and low-cost solution.
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What are the challenges in addressing stubble burning?

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- Farmers have already made investments in seed drill machines for sowing wheat after paddy harvest.
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- Increasing pressure by the government on farmers to purchase the ‘happy seeder’ to abate stubble burning adds to the cost incurred by farmers.
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- Even if the machine is available at a subsidized rate of nearly Rs.1 lakh, it would remain idle the whole year and become a liability in terms of maintenance.
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- Imposing a fine for burning straw is again unreasonable, the fine imposed per hectare is much lower than the cost incurred on a ‘happy seeder’.
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What are the consequences of poor government policies?

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- Green revolution had negative externalities in terms of land degradation, adverse soil health due to overuse of fertilizers and pesticides, and plummeting water tables have surfaced.
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- The increase in the rise of paddy crops has undisputedly been at the cost of the area under maize, cotton, oilseeds and sugarcane.
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- The policy of minimum support price for crops, in tandem with the assured procurement and input subsidy, have left farmers with no option but to follow this rotation.
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- Air pollution is a worry especially in north India, Stubble burning is said to be a key factor behind the formation of a dense cover of smog in this part of India though its contribution is less than 20%.
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- Farmers are held responsible for the crisis but what is at fault are the

flawed and short-sighted policies of the Central and State governments.
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- Punjab faces serious labor shortage problem, In the Agricultural Census 2011, average land-holding size has increased from 2.89 hectares in 1970-71 to 3.77 hectares in 2010-11 — higher than the national average of 1.5 hectares.
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- Paucity of labor for various farm operations is substituted by machines for which the government extends financial support.
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What measures needs to be taken?

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- **Crop diversification -** Government encourages crop diversification towards less water-intensive crops by extending price incentives and better marketing facilities.
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- **Efficient Policies -** The policy of a 'price deficiency system' as initiated in Haryana and Madhya Pradesh should be adopted to strengthen the production and marketing of alternative crops.
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- Another option is to replicate the Telangana model of providing farmers an investment support of Rs. 8,000 per acre each year and withdraw price-based support.
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- **Rental Services -** A feasible remedy could lie in the setting up of custom hiring centers or inviting companies to make investments for rental purposes.
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- If the state provides an app-based support system, to rent out tractors and farm implements and earn additional income there are examples of this in Nigeria and also in Rajasthan, Madhya Pradesh, Gujarat, Uttar Pradesh and Bihar.
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- It would avoid stubble burning and at the same time make farming more mechanized, cost effective and a source of employment.
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- **Sustainable Policies -** Another far-sighted approach could be in effective use of paddy straw.

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- The residual has uses, such as in paper, cardboard and packing material making and also hydro seeding (defiberised rice straw can be used in hydro seeding for erosion control).
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- Farmers, who have already been sensitized to refrain from burning residue, should be given options such as biomass generation.
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- The government should use geospatial techniques to identify areas where stubble burning is severe and encourage installation of biomass plants at such locations.
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Source: The Hindu

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