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Increased Stubble Burning in Punjab

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Why in News

Punjab has been experiencing a **problem of stubble burning** once again despite the government's efforts to control the practice since last few years.

The recent **end of wheat harvesting season** is responsible for the increased incidents of the stubble burning in the State.

Key Points

- Total 13,026 incidents have been reported in 2020 compared to 10,476 incidents in 2019 and 11,236 in 2011.
- The ban and action against people burning the crop residue is regulated under the **Air (Prevention and Control of Pollution) Act, 1981**.
- The stubble burning causes diseases such as problems in breathing, lungs etc, which could also affect recovery of patients suffering from **Covid-19**.

Stubble Burning

- **Description:**
Stubble (parali) burning is the act of setting fire to crop residue to remove them from the field to sow the next crop.

- **Causes:**

- The problem arises due to the use of mechanised harvesting which leaves several inches of stubble in the fields.

Earlier, this excess crop was used by farmers for cooking, as hay to keep their animals warm or even as extra insulation for homes. But, now the stubble use for such purposes has become outdated.

- In order to plant the next crop, farmers in Haryana and Punjab have to remove the stubble in a very short interval to avoid considerable losses. Therefore, burning is the cheapest and fastest way to get rid of the stubble.

The leftover parali in the field may pose the threat of the pest attacks to the upcoming crop.

- **Effects:**

- The stubble burning emits large amounts of toxic pollutants in the atmosphere which contain harmful gases like **methane (CH₄), Carbon Monoxide (CO), Volatile organic compound (VOC) and carcinogenic polycyclic aromatic hydrocarbons.**

After the release in the atmosphere, these pollutants disperse in the surroundings, may undergo a physical and chemical transformation and eventually adversely affect human health by causing a thick blanket of smog.

- The burning of wheat straw **reduces the soil fertility**, besides polluting the environment.
- Additionally, the heat generated by stubble burning penetrates into the soil, leading to the loss of moisture and useful microbes.

- **Alternative Use of Stubble:**

- The stubble can be used for preparation of the **high-grade organic fertilizers** by mixing with cow dung and few natural enzymes.
- **The stubble can be converted to bio coal** and also can be used for **electricity generation.**

Way Forward

- An expansion of schemes like the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** for **harvesting and composting of stubble** will help to resolve the dual problem of **unemployment and stubble burning.**
- The establishment of the **Farm Machinery Banks (FMB)** for custom hiring of in-situ crop residue management machinery.
- The financial incentives to small and marginal farmers will help to engage in the management of the residue of their non-basmati variety rice crop in Punjab, Haryana and Uttar Pradesh.

- However, in the longer time span, shifting the **cropping pattern** away from paddy to maize, cotton, fruits or vegetables in Punjab, Haryana and UP will also help to resolve the issue.

Source: TH