

22 MARCH 2019

ENFORCING A BAN WILL NOT END THE MENACE OF STUBBLE BURNING

Why In News:

- Only educating farmers about the monetary costs of burning stubble can address the environmental crisis triggered every year. Burning stubble, the rice chaff left over after harvesting, is linked to winter air-pollution in the State as well as down-wind Delhi
- According to the team, the government’s efforts earmarking funds for specialised farming equipment (for straw management) or enforcing the state-led ban on the practice are unlikely to solve the problem.
- Farmer cooperative groups a key link between government and farmers ought to be playing a more active role in educating farmers, say key authors associated with the study.

In Brief:

What Is Stubble Burning?

- Stubble burning is, the act of removing paddy crop residue from the field to sow wheat.
- It’s usually required in areas that use the ‘combine harvesting’ method which leaves crop residue behind.
- It is mainly carried out in Haryana and Punjab.
- Open burning of husk produces harmful smoke that causes pollution. Open burning of husk is of incomplete combustion in nature. Hence large amount of toxic pollutants are emitted in the atmosphere. Pollutants contain harmful gases like Methane, Carbon Monoxide (CO), Volatile organic compound (VOC) and carcinogenic polycyclic aromatic hydrocarbons.

What is combine harvesting?

- Combines are machines that harvest, thresh i.e separate the grain, and also clean the separated grain, all at once.
- The problem, however, is that the machine doesn’t cut close enough to the ground, leaving stubble behind that the farmer has no use for.
- There is pressure on the farmer to sow the next crop in time for it to achieve a full yield. The quickest and cheapest solution, therefore, is to clear the field by burning the stubble.

Why do Farmers Burn?

- **Cost Factor:** The straw management equipment is costly and process is time consuming. Also, the cost of stubble management is not taken into account

THE YEAR'S DOUBLE BLACK MARKS

North India has two seasons when crop stubble is burnt – in April-May after the wheat harvest and in October following the paddy harvest. It is particularly noticeable in the north because wheat sowing follows on the heels of paddy harvest, requiring the fields to be cleared and ploughed without delay



<ul style="list-style-type: none"> > 5.5 kg nitrogen, 2.3 kg phosphorus, 25 kg potassium and 1.2 kg sulphur lost when one tonne of straw is burnt > 3 kg of particulate matter, 60 kg CO, 1,460 kg CO2, 199 kg ash and 2 kg SO2 released by burning a tonne of straw > Heat from burning straw penetrates 1 cm into the soil > Burning reduces bacterial 	<ul style="list-style-type: none"> and fungal populations immediately and substantially only in the top 2.5 cm of the soil > Repeated burning permanently reduces bacterial population by more than half > Farmers know of pollution, heat stress and fertility loss due to stubble burning, but have problems availing subsidies for expensive farm 	<ul style="list-style-type: none"> equipment that can plough back stubble into soil > Combine harvesters leave 10-inch crop stubble that is difficult to plough back > Many farmers wish to give up paddy because of stubble problem and heavy dependence on water in generally parched regions
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while determining the minimum support price (MSP).

- **Increasing mechanization of agriculture:** Stubble problem was not as severe when **paddy was harvested manually because the farmers use to cut it as close to the ground as possible**. Due to mechanization the crop residue that remains in the field is of larger quantity;
- Labour costs are very high now
- Combine harvester machines to tide over the labour scarcity- The machine appears to be the key reason behind the problem because it only reaps the grains, leaving stalks or stubble of around 40 cm. Those who want fodder have to get the stubble removed manually or use specialised machines to do the job. But that is costly. For every 0.4 ha of wheat crop, the cost of renting a combine harvester is just Rs 800. Once the machine has harvested, the cost of getting the stubble removed is Rs 3,500/ha.
- **Time Factor:** Delay in sowing means yield decline, this leaves very little time to clear the farm for sowing.
- **Monoculture of wheat and paddy.** In Andhra, bean gram and black gram are planted while rice stubble decomposes on its own.
- Unlike wheat stalks that are used as animal fodder, the paddy straw has high silica content that animals can't digest.
- Since farmers need to sow wheat within a fortnight of harvesting paddy, they burn the straw to save time, labour and money.

Analysis of the issue

- The assured irrigation-based agriculture of north-west India produces a large quantity of wheat and paddy to ensure food security of the country. This region produces an equally large quantity of crop residue.
- During late October to middle November, the whole of the north-west region appears to be burning and the sky is filled with gases injurious to health.
- This makes children and the elderly prone to sickness, which often proves fatal in many cases. With decline in visibility due to smog, road/rail accidents also take place frequently, snatching away thousands of lives.
- Due to high levels of pollution in the air, the National Green Tribunal (NGT) has been issuing directions to governments of Punjab, Haryana, Uttar Pradesh and Rajasthan to take concrete steps to check this menace.
- The governments have been issuing orders to fine those farmers found burning crop residue. But, until now, these orders have been largely defied by farmers who find no other alternative to burning.
- They hold the view that alternatives are costly. Zero tillage technology through the use of Happy Seeder machines or mixing of crop residue in the soil through mulching requires purchase of costly machines beyond their reach. The operation of these machines requires tractors with stronger horsepower than those possessed by most of the farmers.

Measures taken by government:

- The Central government has initiated following steps to reduce and eradicate the stubble burning in the neighbouring states of NCR:
- In the budget of the 2018-19, the central government had announced a special scheme' to encourage farmers in these states to shift to alternative ways of dealing with agricultural waste.
- In pursuance of the announcement in the budget, the government announced a central sector scheme on 'Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi'.
- The scheme provides for in-situ crop residue management machinery to the farmers on subsidy, the establishment of Custom Hiring Centres (CHCs) of in-situ crop residue management machinery and undertaking Information, Education and Communication (IEC) activities for creating awareness among farmers to avoid stubble burning.
- The Union Ministry of Power has brought out a policy for biomass utilization for power generation through co-firing in pulverized coal-fired boilers. The Ministry of Power has decided that the States of Haryana and Punjab shall issue

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bids for all coal based Thermal Power Plants to use a minimum of 5 per cent of biomass pellets and up to 10 per cent to be co-fired with coal.

- The government is also taking steps to popularize zero tillage farming where the crop seed will be sown through drillers without prior land preparation and disturbing the soil where previous crop stubbles are present.

These measures have made a positive impact. The satellite data indicates that paddy residue burning events in 2018 have reduced by 29.5 per cent, 24.5 per cent and 11.0 per cent in the States of Haryana, Uttar Pradesh and Punjab, respectively when compared with the paddy residue burning events in the year 2018.

HYABUSA 2

Why in news?

- Recently the mission discovered that the asteroid Ryugu is in fact a “rubble pile” formed when rocks were blasted off a bigger asteroid and came back together again.
- The discovery means that asteroid Ryugu has a parent body out there somewhere.

In brief:

ABOUT HAYABUSA 2:

- It is an asteroid sample-return mission operated by the Japanese space agency, JAXA.
- It was launched on 3 December 2014 and rendezvoused with the near-Earth asteroid Ryug on 27 June 2018.
- It is in the process of surveying the asteroid for a year and a half, departing in December 2019, and returning to Earth in December 2020.

ISRAELI HOLD OVER GOLAN HEIGHTS

In news:

- President Donald Trump on Thursday announced that the U.S. should recognise Israeli sovereignty over the Golan Heights, an area seized from Syria and annexed in a move never recognised by the international community.

In brief:

- Israel occupied the Golan Heights, West Bank, East Jerusalem and the Gaza Strip in the 1967 Six-Day War. It later annexed the Golan Heights and East Jerusalem in moves never recognised by the most countries.
- Israel advanced into the Golan Heights gradually in the years following the 1948 war Arab-Israeli war, occupied it entirely in the 1967 war and formally annexed the territory in 1981.
- That year, UN Security Council resolution 242 stressed the “inadmissibility of the acquisition of territory by war and the need to work for a just and lasting peace in which every state in the area can live in security”.
- By defying a 52-year-old unanimously adopted UN resolution, Trump has also broken the postwar norm of refusing to recognise the forcible annexation of territory – which has underpinned western and international opposition to the Russian annexation of Crimea.
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Borders of Israel:

- Mediterranean sea, Egypt – West
- Red Sea (Gulf of
- Aqabah) – South
- Jordan – East
- Syria, Lebanon - North

NAUROZ FESTIVAL

Why in news?

- On March 21 it is celebrated throughout the world.

In brief

ABOUT NAUROZ FESTIVAL:

- Nauroz is the Iranian New Year or Persian New Year festival which is celebrated worldwide.
- It has celebrated for over 3000 years in Western Asia, Central Asia, the Caucasus, the Black Sea Basin, and the Balkans.
- It is a secular holiday for most people, but remains a holy day for Zoroastrians, Bahais and some Muslim communities.
- This New Year is the day of the vernal equinox, and marks the beginning of spring in the Northern Hemisphere.
- It marks the first day of the first month (Farvardin) of the Iranian calendar, which coincides with March 21.
- In medieval India, the Delhi Sultan Ghiyasuddin Balban started celebrating this festival, but it was discontinued by the Mughal emperor Aurangzeb.

POLITICAL PARTIES YET TO COMPLY WITH RTI ACT SC TO HEAR PETITIONER NEXT WEEK

Why in News:

- In a time of deep political polarisation, refusing to comply with the RTI Act seems to be one of the few issues that has united national parties across the ideological spectrum.

In Brief :

- Despite a June 2013 ruling from the Central Information Commission (CIC) that they fall within the ambit of the transparency law, parties insist that they cannot be considered public authorities under the Act.
- Six years later, on the verge of another Lok Sabha election, the Supreme Court is set to adjudicate on the issue, with a petition filed jointly by the Association for Democratic Reforms (ADR) and RTI activist Subhash Chandra Agrawal coming up for a hearing .
- “National political parties are the main players as far as elections are concerned. In a democratic system of governance, it is essential that they are held accountable by informed citizens.”
- The Political parties also have constitutional and legal responsibilities as

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they are registered with the Election Commission of India (ECI) and play a vital role in public life and governance. A number of non-governmental organisations, trusts, schools and clubs have also been declared public authorities under the Act.

- A full bench of the CIC ruled that the national parties are public authorities under **Section 2(h) of the Act, and directed them to make voluntary disclosures, appoint public information officers and respond to RTI applications.**
- Also read: Central Information commission (Static), Electoral Bonds, Right To Information Act (RTI), Election Commission

SCO OFFERS “MEDIATION” TO SMOOTHEN INDIA-PAKISTAN TALKS

Why In News:

- The eight nation Shanghai Cooperation organisation (SCO) on Wednesday offered to smoothen a bilateral dialogue between India and Pakistan so that the two countries can resolve their differences, following last month’s Pulwama terror attack in Kashmir.

In Brief:

- Tensions between India and Pakistan escalated after a suicide bomber of terror group JeM killed 40 CRPF personnel in Pulwama.
- SCO has decided to offer mediation to smoothen talks between both the countries since the membership of India and Pakistan-two large states in South Asia-benefited the entire Eurasian region.
- The SCO’s proposal follows similar openings for mediation by China and Russia.
- Military tensions between India and Pakistan, both SCO members, had escalated dramatically following the February 14 Pulwama attack, in which more than 40 CRPF personnel had been killed.
- The SCO head made it plain that the grouping does not offer a dispute settlement mechanism where member countries can lodge their differences.
- SCO is of the opinion that one of such fundamental obligations (of SCO members) is not to bring bilateral contradictions and disagreements to the SCO family, as the SCO is not engaged in the settlement of disputable bilateral issues, whether border, water or other topics in relations between individual Member States.
- But he pointed out that because of their involvement in its institutions and initiatives, the SCO provides India and Pakistan ample opportunities, to quietly address their differences and concerns.
- Mr. Norov said that representatives of India and Pakistan have been actively working in the SCO Secretariat and the executive committee of the Tashkent based SCO Regional Anti-Terrorist Structure (RATS). Besides the two countries were working together in all the 29 working mechanisms of the organisation.

Then why negotiations??

- SCO’s Justification: Being at the same negotiating table, and on a regular basis and in different formats, India and Pakistan are now in the process of a permanent dialogue on all issues which are currently in the agenda of the SCO, so there is a moral responsibility to solve the issues between the two active members for the welfare of the region.
- It is also well known that constant dialogue, especially based on convergence of long-term strategic interests, contributes to the strengthening of mutual understanding, trust and the search for new points of contact.

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The SCO- Afghanistan Contact group:

- New Delhi and Islamabad were active participants of the SCO-Afghanistan Contact Group, which was engaged in Afghanistan's transition.
- The work of the SCO-Afghanistan Contact group at the level of Deputy Foreign Ministers has been intensified. Two promising meetings of the Contact Group have been held in Moscow and Beijing, and preparations are on the way for the third one.
- "A roadmap for the activities of the SCO-Afghanistan Contact group is being developed."
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SCO-Afghanistan Contact Group:

1. To discuss prevailing security situation and economic potential of the landlocked country.
2. After the successful US backed Indo Afghan trade and investment show, this move is another feather in the cap.
3. The SCO contact group on Afghanistan that became defunct in 2009 has been revived following intervention by Russian President Vladimir Putin from this year.
4. India was invited to join maiden SCO contact group meeting on Afghanistan after it became a SCO member this June.

Read also - **SCO**

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PRELIMS TIT BITS:

MITRA SHAKTI VI

- Exercise Mitra Shakti VI between India and Sri Lankan military forces will be conducted from 26 March to 8 April 2019 in Sri Lanka.

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