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1. Uttarakhand forest fire: How are forest fires caused and how frequent are they in India?

Why in News?

Amid forest fires in Uttarakhand's Nainital district, the Indian Air Force was engaged in firefighting operations. The Nainital, Haldwani and Ramnagar forest divisions were worst affected.

While the exact cause of these fires is unknown so far, here is a quick recall of the potential causes of forest fires in general, and the factors that impact their frequency and intensity.



How frequent are forest fires in India?

The forest fire season in India lasts between November to June. Factors like temperatures, precipitation, vegetation, and moisture contribute to the scale and frequency of these fires.

According to experts, three factors cause the spread of forest fires — fuel load, oxygen

and temperature. Dry leaves are fuel for forest fires. The Forest Survey of India (FSI) website states that nearly 36 per cent of India's forests are prone to frequent fires.

Higher fire incidents are reported in March, April and May due to ample availability of dry biomass following the end of winter and amid the prevailing summer season.

The FSI website adds: "Severe fires occur in many forest types particularly dry deciduous forest, while evergreen, semi-evergreen and montane temperate forests are comparatively less prone (India State of Forest Report 2015). Nearly 4% of the country's forest cover is extremely prone to fire, whereas 6% of forest cover is found to be very highly fire prone (ISFR 2019)."

What are some of the causes behind forest fires?

Most fires are believed to be man-made, due to changes in agriculture and unchecked land-use patterns.

The forest department has previously cited four causes of wildfires in Uttarakhand – deliberate fires by locals, carelessness, farming-related activities and natural reasons. According to a government report, locals set forests on fire for the growth of good quality grass, to cover up

illegal cutting of trees, for poaching, etc. Friction of electricity cables with dry leaves also triggers wildfires, as does lightning.

Notably, setting a forest on fire is a punishable offence under the Indian Penal Code. A forest official said several cases have been lodged but the accused remain unidentified in most such cases.

How are forest fires prevented and doused?

The Ministry of Environment, Forest and Climate Change (MoEFCC) lists the following methods to prevent and control a forest fire: construction of watch towers for early detection; deployment of fire watchers; involvement of local communities, and the creation and maintenance of fire lines.

According to the National Disaster Management Authority (NDMA) website, two types of fire lines are in practice – Kachha or covered fire lines and Pucca or open fire lines. In Kachha fire lines, the undergrowth and shrubs are removed while trees are retained to decrease the fuel load.

The Pucca fire lines are clear felled areas separating a forest/compartments/block from another to control the spread of potential fires.

Relevance: GS Prelims & Mains Paper III; Disaster Management

Source: Indian Express

2. Why fentanyl, reportedly the biggest killer of Americans aged 18-49, figured in Antony Blinken's China visit

Why in News?

US Secretary of State Anthony Blinken's three-day visit to China concluded recently, after a meeting with Chinese President Xi Jinping. Apart from talks on Ukraine, Taiwan, and China's "dangerous actions" in the South China Sea, Blinken also spoke about the production and export of "synthetic opioid precursors", specifically the drug fentanyl, during the visit.

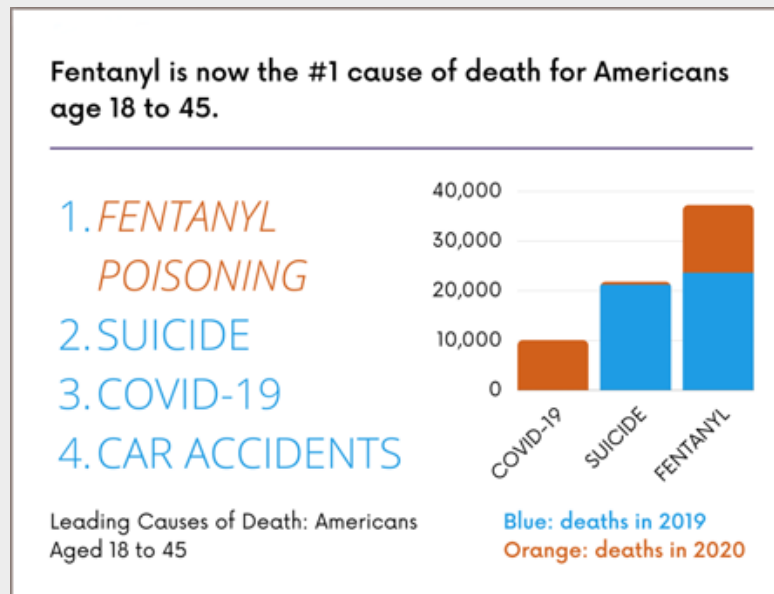
Blinken said that fentanyl synthetic opioids is the leading killer of Americans between the ages of 18 and 49.

What is the scale of the United States' opioid epidemic?

Opioids are a class of drugs that "derive from, or mimic, natural substances found in the opium poppy plant. They produce a variety of effects, including pain relief and euphoria, and are highly addictive. Some common opioids include oxycodone, morphine, codeine, heroin, and fentanyl.

According to the US Drug Enforcement Administration (DEA), Fentanyl is a potent synthetic opioid drug approved by the Food and Drug Administration for use as an analgesic [for pain relief]. It is approximately 100 times more potent than morphine and 50 times more potent than heroin as an analgesic. But overdoses can cause "stupor, changes in pupil size, clammy skin, cyanosis [blue skin], coma, and respiratory failure leading to death.

Users feel opioids' impact immediately, and it wears off as quickly — making users need it regularly. Often, people who initially start using prescription opioid-based painkillers get addicted.



The US has been witnessing what many have called an “opioid epidemic”. According to the US Centers for Disease Control and Prevention, “the number of people who died from a drug overdose in 2021 was over six times the number in 1999. Over 75% of the nearly 107,000 drug overdose deaths in 2021 involved an opioid”.

What is China's role in the opioid epidemic?

The US saw a spike in synthetic opioid-related deaths after 2013, largely due to the rapid proliferation of illicitly manufactured fentanyl, and fentanyl analogues like acetyl fentanyl and carfentanil. It has even been found that inexpensive fentanyl is increasingly cut into other drugs, often without the buyers' knowledge.

The US has primarily blamed two countries for the trafficking of fentanyl — Mexico and China.

Need for US-China cooperation

The US understands that dealing with the fentanyl crisis at home needs cooperation with China. Both governments have made occasional progress on the matter.

In 2019, China announced it would add fentanyl-related substances to a list of controlled narcotic drugs.

However, given the deterioration of the US-China relations following the Covid-19 pandemic, trade wars, and tensions over Taiwan and the South China Sea, cooperation on this front has been adversely impacted.

Relevance: GS Prelims & Mains Paper II; Bilateral Relations

Source: Indian Express

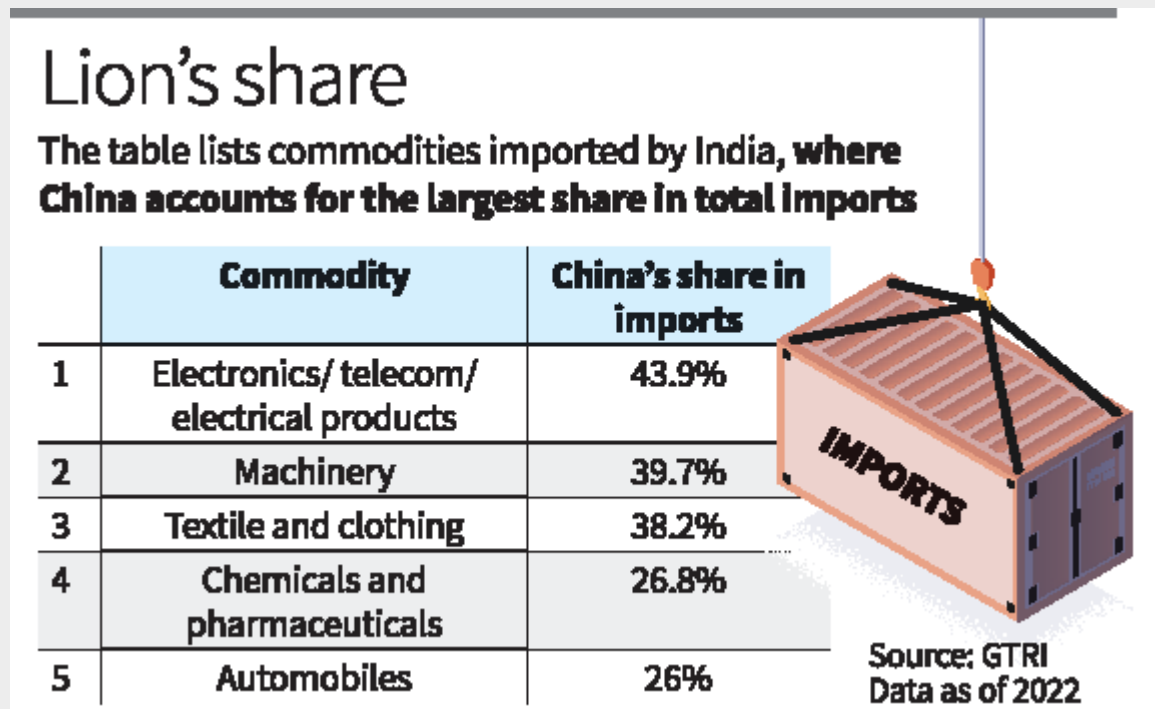
3. India's imports from China rise to \$101 billion while exports stagnate

Imports from China

India's imports from China crossed \$101 billion in 2023-24 from about \$70 billion in 2018-19, and the country's share of India's industrial goods imports has risen from 21% to 30% over 15 years, says a report by the Global Trade Research Initiative (GTRI) which reckoned that Chinese imports will rise sharply in coming years.

China is the top supplier in eight major industrial sectors, including machinery, chemicals, pharmaceuticals, and textiles.

India's total merchandise imports stood at \$677.2 billion in 2023-24, of which 15% or \$101.8 billion worth goods were sourced from China.



Stagnating exports

Between 2018-19 and 2023-24, India's exports to China have stagnated around \$16 billion annually while imports have surged, resulting in a cumulative trade deficit exceeding \$387 billion over six years.

Concern for India

Growing trade deficit with China is a cause of concern. The strategic implications of this dependency are 'profound' and affect not only economic but national security dimensions.

Relevance: GS Prelims & Mains Paper II; Bilateral Relations

Source: The Hindu