



**TATHASTU**  
Institute Of Civil Services

# DAILY CURRENT AFFAIRS

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## ILLEGAL MINING, ENCROACHMENTS, DEFORESTATION POSE THREAT TO ARAVALI RANGE AS NATURAL GREEN WALL

### Illegal mining, encroachments, deforestation pose threat to Aravali range as natural green wall

**Mohammed Iqbal**  
JAIPUR

The Aravali range that stretches from Gujarat to Delhi through Rajasthan, considered the natural green wall in the north-western part of the country, is facing a severe threat from illegal mining, deforestation, and human encroachments, which have led to environmental degradation as well as depletion of groundwater reserves in the region.

The destruction of the hills has also led to loss of vegetation and soil cover, upsetting the area's biodiversity, according to a scientific study on the land use dynamics of the Aravali range post 1975, published in the journal, *Earth Science Informatics*.

Rajasthan occupies 80% of the world's oldest hill range, while other States – Haryana, Delhi, and Gujarat – have 20% share in the terrain. With a length of 692 km and a width variation of 10 km to 120 km, Aravali forms an ecotone

zone between Thar desert and the Gangetic plain, in a semi-arid environment. The range comprises over 500 hillocks, and the altitude of its highest peak, Guru Shikhar in Mount Abu, is 1,722 metres.

The entire 'green wall' is threatened by illegal land encroachments in Haryana, illegal mining in Rajasthan, and illegal tourism and hotel construction work in southern Rajasthan and Gujarat.

Laxmi Kant Sharma, professor and head of the Department of Environmental Science at Central University of Rajasthan, presented the findings of the study towards the end of June, at the International Union of Forest Research Organisations (IUFRO) World Conference in Stockholm, Sweden. The conference witnessed the participation of over 4,200 scientists from 102 countries, and saw an exchange of ideas on climate change, loss of biodiversity, and environmental pollution.

Mr. Sharma said a series

of studies conducted by him, through the application of remote sensing techniques over the last 10 years, had found that in addition to a risk to the biodiversity of the area, the livelihood of communities dependent on the ecosystem of the Aravali range was under serious threat.

"Our discussions at the IUFRO conference underscored the urgency of implementing sustainable practices and policies to protect and restore the Aravali," Mr. Sharma said, adding that the participants in the session addressed by him laid emphasis on getting global cooperation and ensuring strong local action to preserve the ancient hill range for future generations.

**Change in forest area**  
Mr. Sharma said the Aravali range had recorded a change in the forest area significantly. During 1999 to 2019, the forest area decreased up to 0.9% of the total area, which is 75,572.8 sq. km. Until 1999,



**Significant loss:** A hill in the Aravali range damaged extensively by illegal mining. SPECIAL ARRANGEMENT

29,915 sq. km of the range was covered with dry deciduous forest. This was reduced to 29,210 sq. km in 2019, resulting in the disappearance of 705 sq. km area of the forest.

While human settlements constantly grew from 4.5% in 1975 to 13.3% in 2019, waterbodies – comprising 1.7% of the area in 1975 – increased to 1.9% in 1989, followed by their continuous reduction. On the other hand, the mining area increased continuously

from 1.8% in 1975 to 2.2% in 2019. Jaipur, Sikar, Alwar, Ajmer, Bhilwara, Chittorgarh, and Rajasmand districts have intensive mining activities.

The study recorded the enhanced vegetation index (EVI) to identify the condition of biomass, while noticing its least value of zero to minus 0.2 in the upper central Aravali region, falling in Nagaur district. The EVI is a spatial tool in remote sensing that can be used to estimate the bio-

mass and carbon sequestration potential of forests. It is also used to monitor the health of forests over large areas by detecting changes in vegetation.

**High rates of carbon flux**  
The regions in the upper and lower Aravali range recorded high positive rates of carbon flux as they received high rainfall and had protected areas. In contrast, the areas facing a negative rate of carbon flux in the main middle range are near the Thar desert.

**Carbon flux** refers to the amount exchanged between carbon stocks over a specified time, as it records the movement of carbon between land, oceans, atmosphere, and living beings.

agricultural land, and barren land as resilience indicators. The study, which was conducted for the entire Aravali range, found that its southern part was greener than the middle and upper parts because of the presence of more protected regions and less populated area with minimum chances of anthropogenic disturbances. The height of the Aravali peaks, comprising Mount Abu, is maximum in this region.

According to the study, the forest area of the central range decreased by 32%, along with a significant increase in land under cultivation between 1975 and 2019. Most of the central area had the least self-recovery in nature.

**Drone survey**  
"The Aravali range's significance for conserving biodiversity, human livelihoods, desertification protection, and ecosystem services is critical," Mr. Sharma said, while recommending a comprehensive light detection and ranging

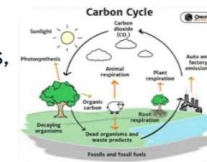
(LiDAR)-based drone survey for the Aravali region. The LiDAR survey targets an object or a surface with laser and measures the time for the reflected light to return to the receiver.

The survey is widely used in remote sensing to examine the surface of the earth and its objects with 3D dimensions. It will facilitate the identification and mitigation of illegal mining activities and enable authorities to take prompt enforcement actions to curb environmental degradation.

Mr. Sharma said the establishment of an independent Aravali Development Authority, comprising experts from diverse fields, would help devise and implement strategies for sustainable preservation of the hill ecosystem.

Besides, a ban on all forms of mining within the Aravali region would safeguard the remaining hills from further depletion and exploitation and preserve its ecological balance and biodiversity.

**Carbon flux is the amount of carbon that moves between Earth's carbon pools over a specific time period.** Carbon pools include the oceans, atmosphere, land, and living things. Carbon flux is usually measured in gigatonnes of carbon per year (GtC/yr), which is a large amount of mass.



Carbon fluxes can be natural or human-caused. Natural exchanges include land-atmosphere and ocean-atmosphere fluxes. Human-caused exchanges include urban carbon fluxes.

The carbon cycle is a natural process that involves the continuous exchange of carbon atoms between these pools. This process includes photosynthesis, respiration, decomposition, and combustion. These processes help maintain a balance of carbon in Earth's systems and play a vital role in regulating the Earth's climate.

For example, plants absorb carbon from the atmosphere for photosynthesis, and then animals consume those plants. When the plants and animals die and decompose, the carbon is released back into the atmosphere. Some carbon doesn't get released back into the atmosphere, and instead becomes fossil fuels. Humans use these fossil fuels for various activities, which release more carbon back into the atmosphere.







## THE ESSENCE OF INDIA'S INFLATION PROBLEM

# The essence of India's inflation problem

The Economic Survey that preceded this year's Union Budget presentation makes a suggestion which has implications for inflation control. It is that the price of food be taken out of the inflation target that the Reserve Bank of India (RBI) is mandated with. In technical jargon, this would amount to targeting 'core' instead of 'headline' inflation, which is the practice now. To appreciate fully the implication of such a move, were it to be implemented, would require recognition of two aspects. These concern the recent experience with inflation in India and the current policy for inflation control.

### Food price and inflation trajectory

First, of late, food price inflation has been very high by historical standards. In June, the year-on-year increase in the price of food was close to 10%. Food price inflation has been elevated since 2019. Note that this is before the onset of the COVID-19 pandemic, not to mention the Ukraine war, implying that domestic factors are at work. With food inflation high and food accounting for a large part of the consumer price index, overall inflation has been higher than usual too.

Now to the second aspect that needs to be understood. Since 2016, by an act of Parliament, controlling inflation in India has been hived-off to the RBI, which is expected to control it through variations in the interest rate, a practice termed as 'inflation targeting'. The term conveys a sense of both capacity and precision, that a central bank can choose the level of inflation. Actually, this is far from assured. The RBI has missed the targeted 4% every year in the past five years. In the United Kingdom, the Bank of England's record has been patchy too. Finally, in the United States, where the Federal Reserve aims at 2% inflation, it shot up to over 8% in 2022. Since then it has plummeted to a level close to the target. In all these economies, the recent trajectory of inflation has been undergirded by fluctuations in the price of food globally.

Two questions arise when we consider the suggestion made in the Economic Survey. First, is the move to remove the price of food from the inflation target justifiable in terms of the goals of economic policy? Second, is the RBI likely to be any more successful in controlling core inflation than it has been in its efforts to control headline inflation? The answer to both the questions is 'no'. India is an economy in which the share of



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food in household expenditure is close to 50%. This is very high by international standards. For instance, in the U.S., it is less than 10%.

Generally the food share is taken as a proxy for the standard of living – and, therefore, of poverty. A high share of food in a household's expenditure leaves it vulnerable to a rise in the price of food. Given this, to ignore changes in the price of food, by adopting an inflation target which excludes it, amounts to ignoring what matters most to a very large section of the Indian population. A technical justification is given to such a proposal by asserting that food price fluctuations are 'transitory', that is, increases are inevitably followed by a downward movement. Well, this certainly is not true for the Indian economy.

Food price inflation has not been negative in any of the 13 years since 2011-12, the base year for the current consumer price index. In fact, it may be said that "India has a food inflation problem", and the assertion that food prices may be ignored as the spikes are only transitory is not credible.

### Targeting core inflation

This takes us to the second issue – whether the RBI can be expected to be any more successful if it were to confine itself to targeting core inflation. This question may be answered quite easily. In the past 13 years, the annual average core inflation has been within the targeted 4% in only one year, that too barely.

This does not surprise us, for our statistical investigation yielded two reasons why this must be so. First, a rise in the RBI's repo rate does not dampen core inflation as claimed. In fact, increasing it is seen to lead to a rise in the inflation rate. This is not without economic logic. As the higher interest rate chokes-off demand, which is how it is meant to work, firms may well raise prices to guard their profits. After all, firms face a double whammy now. Working capital costs would have increased and revenues fallen as aggregate output contracts. We found something else to be the case – that food price inflation is a determinant of core inflation, which, again, is only to be expected. After all, food prices determine wages, which are a part of a firm's costs, the other being materials. So, wages rise as there is food price inflation.

The finding that food prices affect core inflation renders this measure of it without operational significance. It also leads to a deeper understanding. As labour enters all lines of

production to a greater or lesser extent, changes in the price of food determine the inflation rate across an economy. Monetary policy working via changes in the interest rate cannot control inflation as the central bank has no control over the price of food.

If all this is so widely known among discerning economists, why does economic policy in India have to persist with the idea that inflation can be left to the central bank? This is because of an ideological shift that occurred globally after the collapse of the Soviet Union. The view that got installed was that production was to be left to the market and inflation alone was to be controlled by the central bank.

Since 1991, all political parties in India have been eager to demonstrate that they follow closely practices adopted in the West, no matter that they may be irrelevant or, worse still, damaging, to this country. Leaving food price inflation out of the inflation target is one such practice.

### Focus on agricultural production

The rising price of food lies at the core of India's inflation. The proposal to take the price of food out of the official measure of it is no solution to the ongoing inflation. For reasons explained here, if for whatever reason the price of food was to keep rising, as it has for the last five years, the RBI will not be able to control core inflation either.

The current inflation in India can only be handled through supply-side measures that raise the yield in agriculture. The challenges are serious, though not insurmountable for a country that ended chronic food shortage over half a century ago. But success would require a comprehensive approach to agricultural production, one that keeps costs in check so that supply is forthcoming at a steady price as the population and economy grow.

Taking food inflation out of the inflation target without any plan for its control would leave India defenceless against an ever-present threat to the standard of living of its population. The Economic Survey suggests that the adverse welfare effect of food price inflation may be taken care of by income transfers to households. However, if food prices keep rising faster than the overall inflation rate, as they are right now, such transfers would absorb a rising share of the Budget, leaving less and less for public goods. This is undesirable. There is no alternative to controlling the rise in the prices of all goods, which currently is the avowed policy.

The rising price of food lies at the core of India's inflation

### Headline Inflation:

- ❖ Headline Inflation is the measure of total inflation within an economy. It includes price rise in food, fuel and all other commodities.
- ❖ The inflation rate expressed in Wholesale Price Index (WPI) usually denotes the headline inflation. Though Consumer Price Index (CPI) values are often higher, WPI values traditionally make headlines.
- ❖ Core Inflation (Underline Inflation or Non-food Inflation)
- ❖ Core inflation is also a term used to denote the extend of inflation in an economy. But Core inflation does not consider the inflation in food and fuel. This is a concept derived from headline inflation.





- ❖ There is no index for direct measurement of core inflation and now it is measured by excluding food and fuel items from Wholesale Price Index (WPI) or Consumer Price Index (CPI).
- ❖ Core inflation = Headline inflation – (Food and Fuel) inflation.

**Question:**

**Q.1 Core inflation is different from headline inflation because the former [UPSC EPFO 2016 General Ability Test Previous Year]**

- (a) Ignores articles of volatile nature in the price index
- (b) Considers articles of volatile nature in the price index
- (c) Is not based on commodity price index
- (d) Considers only core items of consumption in the price index



