



C.A Dated On 26-04-2019

GS-1

Effect of Monsoon:

Earlier this year, the India Meteorological Department (IMD) had predicted the country would get normal monsoon rains in 2017.

The state-run weather body last week said India's annual monsoon rainfall is expected to be 98% of the long-period average (LPA), up from 96% projected earlier, raising prospects of higher farm output and economic growth.

Why are monsoon rains important for India?

- The monsoon is the lifeblood for India's farm-dependent \$2 trillion economy, as at least half the farmlands are rain-fed.
- The country gets about 70% of annual rainfall in the June-September monsoon season, making it crucial for an estimated 263 million farmers.
- About 800 million people live in villages and depend on agriculture, which accounts for about 15% of India's gross domestic product (GDP) and a failed monsoon can have a rippling effect on the country's growth and economy.
- Whereas, a normal to above-normal and well-distributed monsoon boosts farm output and farmers' income, thereby increasing the demand for consumer and automotive products in rural markets.

What happens in case of a poor monsoon?

- The monsoon has a direct impact on the country's agricultural GDP. The planting of key kharif, or summer, crops like rice, sugar cane, pulses and oilseeds begins with the arrival of monsoon rains in June.
- Summer crops account for almost half of India's food output and a delayed or poor monsoon means supply issues and acceleration in food inflation, a key metric which influences Reserve Bank of India's decision on interest rates.
- A deficit monsoon could also lead to a drought-like situation, thereby affecting the rural household incomes, consumption and economic growth.
- A poor monsoon not only leads to weak demand for fast-moving consumer goods, two-wheelers, tractors and rural housing sectors but also increases



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the imports of essential food staples and forces the government to take measures like farm loan waivers, thereby putting pressure on finances.

- Whereas a normal monsoon results in a good harvest, which in turn lifts rural incomes and boosts spending on consumer goods.
- It also has a positive impact on hydro power projects.

Agricultural Yield:

Why in News?

This summer's foodgrain production is likely to be higher than last year's, according to the Agriculture Ministry targets for the kharif season, riding on the back of the Indian Meteorological Department's [forecast](#) of a "near-normal" monsoon.

Expected Production:

- Rice production this summer is expected to hit 102 million tonnes, while total foodgrain production is being pegged at 147.9 million tonnes, according to the Ministry's presentation at its annual Kharif Conference on Thursday.
- These targets for kharif 2019 are higher than last year's targets, as well as the actual output in 2018.
- Second advance estimates show foodgrain production touching 142.24 million tonnes in the 2018 kharif season, with rice output of 101.96 MT.

Rabi harvest

- The Ministry is also targeting a higher rabi or winter season harvest in 2019, with foodgrain production set at 143.2 MT.
- The wheat production target is marginally higher than last year's target at 100.5 MT.
- With regard to coarse cereals, the Ministry has maintained its targets for jowar, bajra, small millets and barley at exactly the same level as last year, but hopes to increase the production of maize, projecting a 1.6 MT increase to hit a production of 28.9 MT from both kharif and rabi seasons together.



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- This has pushed up the overall coarse cereal target to 48.3 MT in the coming year.

Cane farmers hit hard

- Sugarcane production is likely to set a new record again this year, with the Ministry projecting a harvest of 385.5 MT, a jump from last year's target of 355 MT.
- Record harvests over the last few years have caused a glut in production, leading to a crash in sugar prices, leaving cane farmers in the lurch as mills are unable to pay them their pending dues.
- Oilseeds production targets for 2019-20 remained steady at 36.1 MT, while cotton production targets increased minimally to 35.75 million bales, with each bale representing 170 kg.

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Citizenship Bill:

Why in News?

A federation of 25 Himas or Khasi kingdoms that have a cosmetic existence today, plan to revisit the 1948 agreements that made present-day Meghalaya a part of India.

The revisiting in consultation with legal experts and academicians is aimed at safeguarding tribal customs and traditions from Central laws in force or could be enacted, such as the Citizenship (Amendment) Bill .

Details:

- The bill is one of the factors in our move to strengthen the Federation of Khasi States that were ruled by a Syiem (king-like head of a Hima).



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- The 25 Khasi states had signed the Instrument of Accession and Annexed Agreement with the Dominion of India between December 15, 1947, and March 19, 1948.
- The conditional treaty with these states was signed by Governor General Chakravarty Rajagopalachari on August 17, 1948.
- The Khasi states, though, did not sign the Instrument of Merger unlike most other states in India.

Background:

- During the British rule, the Khasi domain was divided into the Khasi states and British territories.
- At that time, the British government had no territorial right on the Khasi states and they had to approach the chiefs of these states if they needed land for any purpose.
- After independence, the British territories became part of the Indian dominion but the Khasi states had to sign documents beginning with the Standstill Agreement that provided a few rights to the states," Mr Syiem said.
- Though the Constitution has provided self-rule to a considerable extent through tribal councils, there has been an increasing demand for giving more teeth to the Khasi states.

Cell Based Meat:

Why in News?

In what could be a boost for cell-based meat in India, the Centre has approved a ₹4.5 crore grant to two premier Hyderabad-based institutions for [research](#) into this technology that involves growing animal cells in a laboratory to produce slaughter-free meat.

About the Project:



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- The grant, from the Department of Biotechnology, is for an 18-month project, which will look into developing methods to cultivate stem cells from tissue samples of sheep, to produce mutton.
- The project will be carried out jointly by the Centre for Cellular and Molecular Biology (CCMB), which operates under the aegis of the Council of Scientific and Industrial Research (CSIR), and the National Research Centre on Meat (NRCM), which was set up by the Indian Council of Agricultural Research (ICAR).
- The funding was among the highest by any government in the short history of cell-based meat.
- This funding has been given to CCMB to develop technology to take laboratory cell culture process to cell-based meat production which can be scalabl.
- This funding is one of the major initiatives by any government body across the world and much-needed encouragement for other agencies and industry to participate.”

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Ammunition Tunnel:

What is It?

Indian Army is planning to construct underground tunnels for storage of ammunition along the border with China and Pakistan and Public Sector Undertaking NHPC Limited is being roped in for the purpose, army sources said.

Details of Project:

- Indian Army is in the process of executing pilot projects for construction of semi underground and cavern type ammunition storage construction through NHPC Ltd..
- Major armies, including China and the U.S., already use underground ammunition storage, a second source observed.
- These tunnels will be built in high altitude areas in the Northern and Eastern borders.



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- Initially, four pilot projects would be taken up at four different locations along the Northern border and in Jammu and Kashmir at a cost of ₹15 crore.
- As the conditions in the caverns are controlled, it ensures better safety of sensitive ammunition minimising accidental explosions.
- As part of the project, a number of caverns with storage capacity of 200 metric tonnes will be built in mountain folds in identified areas.
- The Army has debated the idea of underground storage of ammunition for a long time as it has several advantages compared to over ground storage.
- A range of ammunition used by the Army, ranging from bullets, rockets to anti-tank and surface to air missiles, can be stored in the caverns.

Advantages:

- Underground storage offers improved safety, easier camouflage from enemy observation and satellite imagery and protection from enemy strikes like those seen during the aerial engagement a day after the Balakot air strike when Pakistan Air Force jets targeted Indian army installations along the Line of Control (LoC).

Emperor Penguins:

Why in News?

The second largest Emperor penguin colony in the world has suffered a "catastrophic" breeding failure after nearly all chicks born over three years died as their icy Antarctic habitat shrinks.

- **Research Report:**
- The British Antarctic Survey (BAS) used satellite imagery to study the behaviour of the Halley Bay colony in the Weddell Sea due south of Cape Hope, which normally sees up to 25,000 penguin pairs mate each year.
- They found that in 2016, when abnormally warm and stormy weather broke up the sea-ice on which the penguins normally raise their young, almost all the chicks died.
- This pattern was repeated in 2017 and 2018.
- The BAS said the colony at Halley Bay has "all but disappeared".



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About Emperor Penguin:

- The **emperor penguin** is the tallest and heaviest of all living [penguin](#) species and is [endemic](#) to [Antarctica](#).
- Feathers of the head and back are black and sharply delineated from the white belly, pale-yellow breast and bright-yellow ear patches.
- Like all penguins it is flightless, with a streamlined body, and wings stiffened and flattened into flippers for a marine [habitat](#).
- The only penguin species that breeds during the Antarctic winter, emperor penguins trek 50–120 km (31–75 mi) over the ice to [breeding colonies](#) which can contain up to several thousand individuals.