

**06 FEBRUARY 2019**

**1.Explain measures for tiger protection: High Court**

**All wild animals, even birds, need to be protected, court tells officials**

Responding to a Public Interest Litigation (PIL) filed by a wildlife activist, the Telangana High Court on Tuesday directed the top brass of the Forest Department, including the **Kawal Tiger Reserve** Field Director, to explain measures taken by them to protect tigers in the State.

**Field staff**

For this, Forest Department officials and personnel working in the field needed to present their ideas and suggestions.

Within a span of one month, two instances of tiger death had been reported. While one died in the Pembri forest, the other was found dead on the outskirts of Shivaram of Jannarammandal in Mancherial district. Both died of electrocution.

**Uncover truth**

It should be ascertained if the two tigers died because of the electric fence set up by people living in the forest for their protection or poachers had fixed it to kill wild animals.

The judges observed that at an international conference some speakers had expressed the opinion that tigers would survive if they were left on their own and there was no need for any special measures for their conservation.

**Government Initiatives**



- Project Tiger was incorporated in 1973 with nine tiger reserves covering an area of 16,339 sq.km.
- The Indian [Wildlife Protection Act of 1972](#) enables government agencies to take strict measures so as to ensure the conservation of the Bengal tigers
- Indian Board For Wildlife (IBWL) is responsible for carrying out the activities pertaining to Wildlife conservation with the State Governments .

**2.Bullet train gets green light via national park**

A committee, chaired by Union Environment Minister Harsh Vardhan, has accorded wildlife clearance to the Mumbai-Ahmedabad high speed train corridor that encroaches upon a **flamingo sanctuary and the Sanjay Gandhi National Park, the home to leopards, in Mumbai.**

The proposal involves diversion of 3.2756 ha of forestland from the **Thane Creek Flamingo Wildlife Sanctuary** and 97.5189 ha of land close to the boundary of the forest’s protected area.

A wildlife clearance is a critical part of the forest clearance process. A person privy to the process said forest clearance wasn’t part of the original agenda of the meeting.

The project was accorded wildlife clearance on 10th January, according to records of the meeting.

The TCF in Thane, Mumbai, came into being August 2015 and the 1,690-hectare bird haven — 896 hectares of mangrove forests and 794 hectares of a water-body — is on the western bank of the creek, between

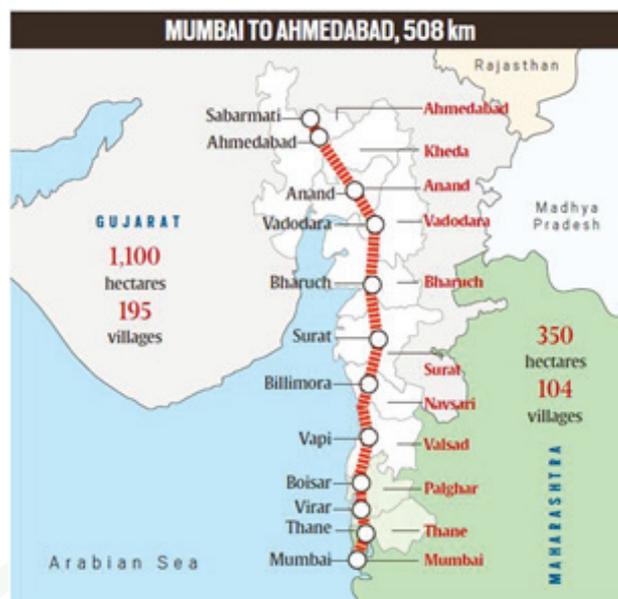
**Note**



the Airoli and the Vashi bridges connecting Mumbai and Navi Mumbai.

Apart from the creek, the proposal also involves diverting 32.75 ha of forestland and 77.30 ha of non-forestland from Sanjay Gandhi National Park and from 0.6902 ha of forestland and 4.7567 ha of non-forest land from **Tungareshwar** Wildlife Sanctuary.

While according clearance, the National Board of Wildlife-- the apex body tasked with according permissions to allow forest land to be diverted for industrial development-- has laid pre-conditions for the bullet train project. These include paying Rs 10 crore (2% of 500 crore—the component of the project in Mumbai) for habitat improvement of the sanctuary, barricading the work site to ensure that no debris fall outside the project area and providing site and funds for penal plantation of at least 5 times the number of mangroves plants anticipated to be lost in this project.



**Mumbai-Ahmedabad bullet train project**

Largely funded by a soft loan by Japan, the Rs 1 trillion Mumbai-Ahmedabad bullet train project has a track-length of 508 km, and will originate at the BandraKurla Complex, Mumbai and terminate at the Sabarmati, in Gujarat. The length across the State of Maharashtra will be 155.64 km 4.3 km across Dadra & Nagar Haveli. The total length across the state of Gujarat would 348.2 km and would pass through the districts of Ahmedabad, Kheda, Anand, Vadodara, Bharuch, Surat, Navsari, and Valsad in Gujarat.

**3.Govt. subsidy spend on the rise again**

Rising LPG prices and higher subscribers have resulted in the government’s subsidy expenditure over the last two years reversing a declining trend established in the previous six years, an analysis of Budget documents.

The data show that the government’s total expenditure on subsidies is expected to make up 9.83% of its total expenditure overall in 2019-20, according to the Budget estimate for the year, up from the 9.65% in the revised estimate for 2018-19. This increase might not seem significant by itself, but it becomes noteworthy when viewed against the backdrop of a consistent annual fall from 18.2% in 2012-13 to 8.15% in 2017-18.

**Sharp rise**

A deeper dive into the data shows that the reason for this reversal is the sharp rise in food and petroleum subsidies over the last two budgets of 2018-19 and 2019-20. Food subsidies increased to Rs. 1,71,298crore in 2018-19, up a whopping 70.8% over its allocation in the previous year. Similarly, petroleum subsidies have been budgeted to increase a significant 50.9% in 2019-20 to Rs. 37,478 crore.

While the increase in the food subsidy allocation is a reflection of the increase in the Minimum Support Prices hiked across the board, the

**Note**



reason behind the increase in the petroleum subsidy has to do in particular with the government’s focus on LPG as a source of cleaner cooking fuel. “The reason for the increase in the petroleum subsidy is because of an increased allocation for the Direct Benefit Transfer scheme for LPG.

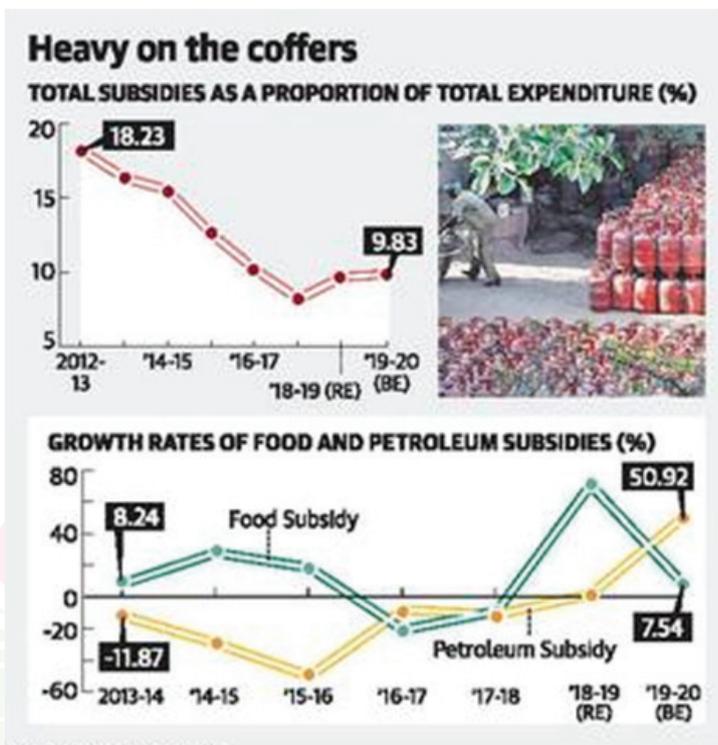
LPG prices have been rising, and the number of subscribers has been increasing, so the subsidy amount will naturally increase. According to data with the Indian Oil Corporation, subsidised LPG prices in Delhi have risen from Rs. 399.26 per 14.2 kg cylinder in June 2011 to Rs. 500.9 per cylinder in December 2018.

The price of an unsubsidised cylinder was Rs. 809.50 in December, which means the subsidy was Rs. 308 a cylinder. And the Centre subsidises 12 cylinders a year per customer.

The government has two major schemes in the LPG sector. **PAHAL scheme**, the first, involves direct cash transfers to LPG consumers for 12 numbers of 14.2 kg cylinders per year. The second scheme, the **Ujjwala Yojana**, seeks to give free LPG connections to poor households. In terms of consumption, data with the Petroleum Planning and Analysis Cell show that LPG consumption has grown in tandem with the launch of the PAHAL scheme. While LPG consumption grew 1.6% and 4.4% in 2012-13 and 2013-14, respectively, the growth averaged 9.4% in the years since the scheme was launched in 2013.

Budget provisions have grown in consonance with this growth rate, with the government providing a huge Rs. 29,500 crore for the Direct Benefit Transfer scheme, up from Rs. 16,477.8 crore in the previous year and Rs. 13,097.13 crore in 2017-18. Interestingly, the allocations for Ujjwala Yojana have fallen nearly 15% in 2019-20 compared to the previous year.

If the trend of rising subsidy prices continues into the future, then it could certainly be a matter of concern when it comes to the government’s fiscal consolidation plans.



#### 4. Why women outlive men, stay mentally sharp longer

##### Women’s brains are on average about three years younger: study

Women tend to outlive men and stay mentally sharp longer, and a new study out could explain why: female brains appear on average about three years younger.

The study enrolled 121 women and 84 men, who underwent PET scans to measure brain metabolism, or the flow of oxygen and glucose in their brains.

**Note**



### Role of glucose

Like other organs in the body, **the brain uses sugar as fuel**. But just how it metabolises glucose can reveal a lot about the brain's metabolic age.

Subjects ranged from their 20s to 80s, and across those age spans, women's brains appeared metabolically younger than men's.

A machine-learned algorithm showed that women's brains were on average about 3.8 years younger than their chronological ages.

And when compared to men, male brains were about 2.4 years older than their true ages.



### Late adulthood

It's not that men's brains age faster, they start adulthood about three years older than women, and that persists throughout life.

One theory is that hormones might begin shaping brain metabolism at a young age, setting females on a pattern that is more youthful throughout their lives, compared to men.

Scientists hope to find out if metabolic differences in the brain may play a protective role for women, who tend to score better than men on cognitive tests of reason, memory and problem solving in old age.

It could mean that the reason women don't experience as much cognitive decline in later years is because their brains are effectively younger.

More work is underway to confirm and better understand the implications of the research.

## 5. These dinosaurs used spiny backbone for self-defence

### Bajadasauruspronuspinalx lived 140 mn years ago

A herbivorous dinosaur that fended off predators with a row of spines running along its back and lived 140 million years ago has been found in Argentine Patagonia.

The discovery of the new species of dicraeosauridae, christened Bajadasauruspronuspinalx, was revealed in scientific journal Nature.

A reproduction of its spiny neck was exhibited in the Cultural Science Centre in Buenos Aires.

The long and sharp spines — very long and thin — of Bajadasaurus and Amargasauruscazaui (another dicraeosauridae) must have been to deter predators. It is just bare bone structures or covered only by skin, they could have been easily broken or fractured with a blow or when being attacked by other animals.

These spines must have been covered by a keratin sheath similar to what happens in the horns of many mammals.

### Note



Bajadasaurus was a quadruped and part of the wider Sauropod family that lived from the late Triassic period (around 230 million years ago) until the end of the late Cretaceous (70 million years ago).

Amargasauruscazaui lived in the South American continent around 15 million years after Bajadasaurus and both species were found in the Neuquen province around 1,800 km south of Buenos Aires.



It's the same zone in which Giganotosaurus carolinii, considered the biggest carnivorous dinosaur of all time, was discovered in 1993.

It lived during the late Cretaceous period and could have fed on Bajadasaurus.

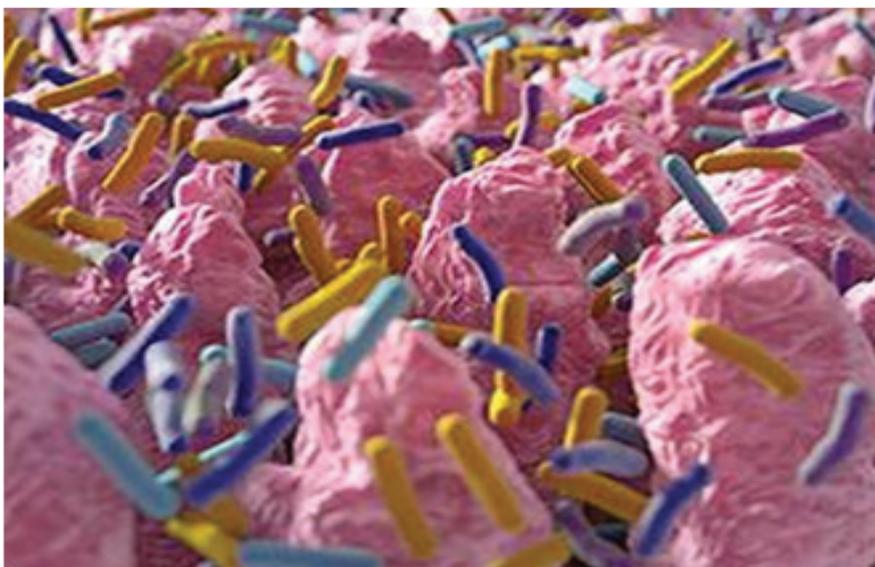
### Fleshy hump

The spines could have been used to regulate the dinosaur's temperature or even to render it more sexually attractive to a potential mate. Bajadasaurus could have had a fleshy hump between the spines that served a similar role to that of a camel.

The Bajadasaurus skull is the best preserved example of a dicraeosauridae ever found. "Studies suggest this animal spent much of its time feeding on ground plants while its eye sockets allowed it to key an eye on what was happening around it.

## 6. Study links depression to digestive bacteria

Bacteria in the gut may affect our mental well-being and could be linked to depression.



### Note



The World Health Organisation says an estimated 300 million people suffer from depression, and there are known links between a patient's physical and mental health.

A wide range of gut bacteria can produce chemicals that significantly impact the brain, including several microorganisms linked positively or negatively to mental health.

The experiment, known as the **Flemish Gut Flora Project**, examined depression data and stool samples from more than 1,000 people. People with depression had consistently low levels of bacteria Coprococcus and Dialister whether they took antidepressants or not.

The notion that microbial metabolites can interact with our brain and thus behaviour and feelings is intriguing.

While the study showed a link between gut bacteria and an individual's mental well-being, that didn't mean that one thing directly caused the other.

The research could pave the way for new, smarter treatments for the illness. After studying the genomes of over 500 types of gut bacteria, they found that several of them produced neuroactive compounds linked to a variety of mental processes.

## 7. Kartarpur corridor site plans shared with Pak.

### Land acquisition for 100-yard highway and checkpoint to be fast tracked by Punjab govt.

India has shared with Pakistan coordinates of the 'zero point' along the border in Punjab's Gurdaspur district where the 100-yard corridor, leading to the Kartarpur Sahib shrine, will be built.

The notification to acquire land for an Integrated Checkpost (ICP) will be issued and the Punjab government has assured that the land will be made available for both projects [the highway and ICP] by mid-March.

Sikh groups have been petitioning governments in New Delhi and Islamabad to build a pilgrim corridor over the border from Dera Baba Nanak in Gurdaspur to Kartarpur in Pakistani Punjab's Narowal province. The plan is to complete the project by **November 23, 2019, the 550th birth anniversary of Guru Nanak**.

On January 19, Pakistan announced that it had shared the draft of the agreement, to be signed by the two governments, for facilitation of (Indian) Sikh Yatrees to visit the Gurudwara, Darbar Sahib Kartarpur, Narowal, Pakistan.

### Kartarpur Corridor

The Union cabinet has approved the construction of a 'corridor' linking India with the historic Kartarpurgurdwara on the banks of the Ravi river, in Pakistan.

- Kartarpurgurdwara is the revered shrine across the border where Guru Nanak Dev, the founder of Sikhism spent the last 18 years of his life.
- The corridor will connect the holy shrines of Dera Baba Nanak Sahib in Gurdaspur district of Punjab in India with Gurudwara Darbar Sahib in Kartarpur in Pakistan.
- The length of the corridor is about 4 km (2 km on either side of the international border).
- The Pakistan government has also decided to open the corridor.
- The corridor will commemorate the 550th birth anniversary of Guru Nanak Dev.

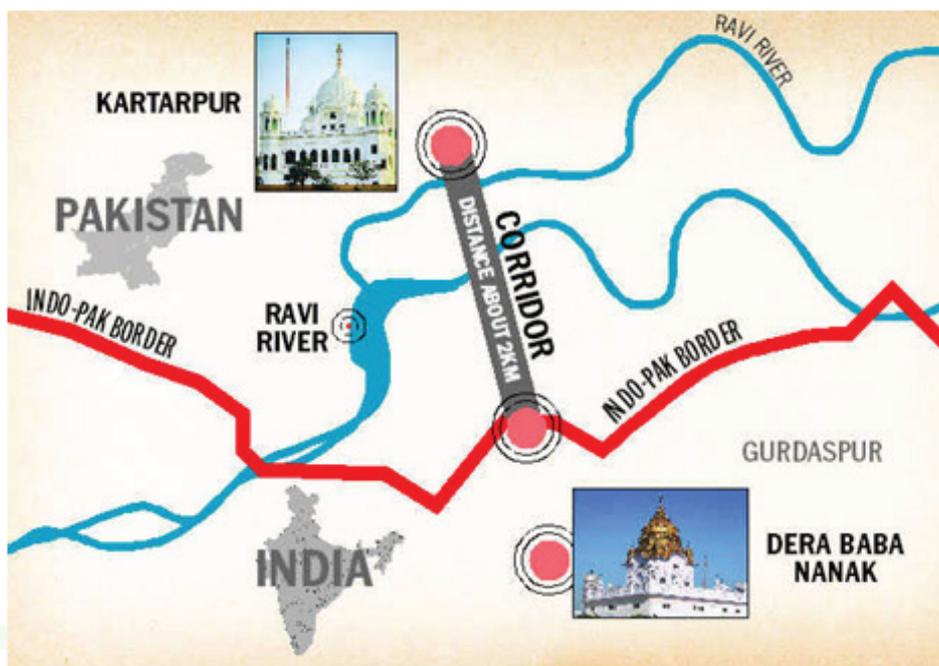
### Note



- Pilgrimages between India and Pakistan are governed by the 1974 Protocol on Visits to Religious Shrines, which includes a list of shrines in Pakistan and India open for visitors from the other country, and for which visas are required.
- The Kartarpur Corridor, which will provide visa-free access to the shrine when it becomes ready on both sides, may need a separate treaty.

**Significance**

- The Kartarpur Sahib corridor was first proposed in 1999 when Prime Minister AtalBihari Vajpayee took a bus ride to Lahore.
- The Kartarpur corridor will be implemented as an integrated development project with Government of India funding. The development comes ahead of the 550th Prakash Purab or 550th birth anniversary of Guru Nanak in 2019.
- It will allow Indian devotees to visit Kartarpur shrine located 2 km inside Pakistan in Narowal district.
- Until now, most Indian devotees have had to contend with a darshan using binoculars installed at Dera Baba Nanak Sahib.
- India has also asked Pakistan to develop the corridor with suitable facilities in its territory from the International Border to facilitate easier access of Indian pilgrims.
- The forward movement on the Kartarpur corridor can be considered a big development since despite the India-Pakistan deadlock in talks, both New Delhi and Islamabad have been able to form a consensus on the issue.



**Note**

