

## 01 March 2019: UPSC Exam Comprehensive News Analysis

### Table of Contents

GS1 Related .....	2
GS2 Related .....	2
Polity and Governance .....	2
1. Union Cabinet approves software product policy .....	2
2. Cabinet Okays National Mineral Policy 2019 .....	3
3. Cabinet clears voluntary use of Aadhaar as identity proof.....	4
4. J&K ordinance cleared by Union Cabinet doesn't tinker with 35A or 370' .....	5
International Relations .....	6
1. Another push at UNSC to ban Azhar .....	6
GS3 Related .....	7
Environment .....	7
1. Rhinos without borders are conservation credo .....	7
GS4 Related .....	8
Editorials .....	9
International Relations .....	9
1. Living on the edge (India-Pakistan Relations) .....	9
INDIAN ECONOMY .....	11
1. Time to usher in the EV revolution (Ushering the electric vehicle revolution).....	11
2. Is India ready for the post-diesel era? .....	14
Tidbits.....	16
1. TikTok fined \$5.7 mn in U.S. for illegally gathering children's data .....	16
2. EC allows 11 documents to prove voters' identity .....	16
UPSC Prelims Practice Questions .....	17
UPSC Mains practice Questions .....	18

## GS1 Related

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## GS2 Related

### Polity and Governance

#### 1. Union Cabinet approves software product policy

##### Context

- The Union Cabinet has approved the National Policy on Software Products (NPSP) 2019 that aims to help the industry grow at CAGR of 40% to reach \$70-80 billion by 2025, while creating employment opportunities for 3.5 million people.

##### Background

- The Indian IT Industry has predominantly been a service Industry. However, a need has been felt to move up the value chain through technology oriented products and services.
- To create a robust software product ecosystem the Government has approved the National Policy on Software Products - 2019, which aims to develop India as the global software product hub, driven by innovation, improved commercialisation, sustainable Intellectual Property (IP), promoting technology start-ups and specialized skill sets.
- Further, the Policy aims to align with other Government initiatives such as Start-up India, Make in India and Digital India, Skill India etc so as to create Indian Software products Industry of USD ~70-80 billion with direct & indirect employment of ~3.5 million by 2025.

##### The five Missions under the NPSP-2019

1. To promote the creation of a sustainable Indian software product industry, driven by intellectual property (IP), leading to a ten-fold increase in India share of the Global Software product market by 2025.
2. To nurture 10,000 technology startups in software product industry, including 1000 such technology startups in Tier-II and Tier-III towns & cities and generating direct and in-direct employment for 3.5 million people by 2025.
3. To create a talent pool for software product industry through (i) up-skilling of 1,000,000 IT professionals, (ii) motivating 100,000 school and college students and (iii) generating 10,000 specialized professionals that can provide leadership.
4. To build a cluster-based innovation driven ecosystem by developing 20 sectoral and strategically located software product development clusters having integrated ICT infrastructure, marketing, incubation, R&D/testbeds and mentoring support.
5. In order to evolve and monitor scheme & programmes for the implementation of this policy, National Software Products Mission will be set up with participation from Government, Academia and Industry.

## 2. Cabinet Okays National Mineral Policy 2019

### Context

- The Union Cabinet has approved the National Mineral Policy 2019. The policy is aimed at bringing about more effective regulation to the sector as well as a more sustainable approach while addressing the issues of those affected by mining.

### Background

- National Mineral Policy 2019 replaces the extant National Mineral Policy 2008 ("NMP 2008") which was announced in year 2008.
- The impetus to review NMP 2008 came about by way of a direction from the Supreme Court judgment of 2017
- In compliance of the directions of the apex Court, the Ministry of Mines constituted a committee under the chairmanship of Dr. K Rajeswara Rao, Additional Secretary, and Ministry of Mines to review NMP 2008.
- The Ministry of Mines accepted the committee Report and invited the comments/ suggestions of the stakeholders as part of the PLCP process. Based on the received comments/ suggestions received in PLCP process and the comments/ suggestions from the Central Ministries/ Departments the Ministry of Mines finalized the National Mineral Policy 2019.

### Benefits

- The New National Mineral Policy will ensure more effective regulation.
- It will lead to sustainable mining sector development in future while addressing the issues of project affected persons especially those residing in tribal areas

### Objectives

- The aim of National Mineral Policy 2019 is to have a more effective, meaningful and implementable policy that brings in further transparency, better regulation and enforcement, balanced social and economic growth as well as sustainable mining practices.

### Details of the Policy

- The National Mineral Policy 2019 includes provisions which will give boost to mining sector such as - encouraging the private sector to take up exploration, encouragement of merger and acquisition of mining entities and transfer of mining leases and creation of dedicated mineral corridors to boost private sector mining areas.
- The policy include the introduction of the right of first refusal for the reconnaissance permit (RP) and prospecting license holders, encouraging the private sector to take up exploration and the auctioning of virgin areas on a revenue- sharing basis.
- The 2019 Policy proposes to grant status of industry to mining activity to boost financing of mining for private sector and for acquisitions of mineral assets in other countries by private sector
- It also mentions that Long term import export policy for mineral will help private sector in better planning and stability in business
- The Policy also mentions rationalize reserved areas given to PSUs which have not been used and to put these areas to auction, which will give more opportunity to private sector for participation

- The Policy also mentions to make efforts to harmonize taxes, levies & royalty with world benchmarks to help private sector
- Among the changes introduced in the National Mineral Policy, 2019 include the focus on make in India initiative and Gender sensitivity in terms of the vision.
- In so far as the regulation in Minerals is concerned, E-Governance, IT enabled systems, awareness and Information campaigns have been incorporated.
- Regarding the role of state in mineral development online public portal with provision for generating triggers at higher level in the event of delay of clearances has been put in place.
- NMP 2019 aims to attract private investment through incentives while the efforts would be made to maintain a database of mineral resources and tenements under mining tenement systems.
- The new policy focuses on use coastal waterways and inland shipping for evacuation and transportation of minerals and encourages dedicated mineral corridors to facilitate the transportation of minerals.
- NMP 2019 proposes a long term export import policy for the mineral sector to provide stability and as an incentive for investing in large scale commercial mining activity.
- The 2019 Policy also introduces the concept of Inter-Generational Equity that deals with the well-being not only of the present generation but also of the generations to come and also proposes to constitute an inter-ministerial body to institutionalize the mechanism for ensuring sustainable development in mining.

### **3. Cabinet clears voluntary use of Aadhaar as identity proof**

#### **Context**

- The Union Cabinet, chaired by Prime Minister Narendra Modi has approved the promulgation of an Ordinance to allow voluntary submission of Aadhaar as identity proof for use by private entities such as banks, telcos and fintech firms.
- The amendments proposed are the same as those contained in the Bill passed by the Lok Sabha on January 4, 2019. However, the Bill was not passed in the Rajya Sabha which was adjourned sine die.

#### **Highlights of the Ordinance**

- The Ordinance gives a child an option to exit from Aadhaar on attaining 18 years of age.
- The amendment provides for civil penalties for violations of the Aadhaar Act and provisions by entities in the Aadhaar ecosystem.
- It permits the entities to perform authentication only when they are compliant with the standards of privacy and security specified by the authority.
- Subsequent to this amendment, no individual shall be compelled to provide proof of possession of Aadhaar number or undergo authentication for the purpose of establishing his identity unless it is so provided by a law made by Parliament
- The amendments “provide for 12-digit Aadhaar number and its alternate virtual identity to conceal the actual Aadhaar number.”

#### **Background of the issue**

- The Supreme Court judgment in September 2018 upheld the validity of Aadhaar, however, with certain restrictions

- A Constitution Bench had struck down Section 57 of the Act that allows private entities to use the unique number for verification. The Bench also declared that seeking to link it with bank accounts and SIM cards was unconstitutional.
- “The initial proposal was prepared by the Unique Identification Authority of India (UIDAI). It submitted that once a child turns 18, he/she will be given six months to decide if he/she wants to withdraw,” a senior official said.
- In line with the court order, the proposal seeks to appoint an adjudicating officer to decide whether a person’s Aadhaar-related data need to be disclosed in the interest of national security.
- The court had also struck down Section 33(2), which allowed disclosure of Aadhaar information for national security reasons on the orders of an officer not below Joint Secretary. It had said an officer above Joint Secretary should consult a judicial officer and together take a call.

### What is Aadhaar?

- The UIDAI allots a unique identifier (Aadhaar Number) to each citizen and deposits their biometric and demographic data in a Central Identities Data Repository (CIDR).
- Aadhaar or Unique Identification Number (UID) is a 12-digit number that serves as a unique identifier for Indian citizens.
- Aadhaar’s database has the records of over 1.12 billion registered users and is rapidly becoming the government’s base for public welfare and citizen services scheme.
- Aadhaar authentication process validates an identity with a ‘yes’ or ‘no’, using one of the six demographic fields (name, date of birth, gender, address, mobile or email) along with either biometrics or One Time Password (OTP).
- The process is designed in such a way that neither the purpose of the transaction nor any other context is known to the Aadhaar system in order to ensure the safety of any transaction.

## 4. J&K ordinance cleared by Union Cabinet doesn’t tinker with 35A or 370’

### Context

- The Union Cabinet has approved the Jammu and Kashmir Reservation (Amendment) Ordinance, 2019 that will pave the way to extend reservation in jobs, promotions and education to people living 10 km from the International Border (IB) in Jammu.

### Impact

- Once the Ordinance is issued, it would pave the way for bringing persons residing in the areas adjoining International Border within the ambit of Reservation at par with persons living in areas adjoining Actual Line of Control.

### Details of the Ordinance

- 10% reservation for economically weaker sections made applicable in J&K also. This would pave the way for reserving State Government jobs to the youth of J&K who are from economically weaker sections belonging to any religion or caste.



- It may be recalled that 10% reservation to economically weaker sections was introduced in rest of the country through the 103rd Constitution Amendment in January 2019. This will be in addition to such reservation available in Govt. of India jobs also.
- Benefit of promotion to Scheduled Castes and Scheduled Tribes, which include Gujjars and Bakarwals amongst others, has also been made applicable to the State of J&K. After a long wait of 24 years, the 77th Constitution Amendment of 1995 has now been applied to the State of J&K.
- People living near the International Border have been brought at par with those living near the Line of Control for reservation in State Government jobs by amending the Jammu and Kashmir Reservation Act, 2004 through an Ordinance.
- Earlier, the provision of 3% reservation was available only for youth living within 6 kms. Of LoC in J&K. Now, this provision will be applicable for people living near the international border also. This has been a long-pending demand of the population living near the international border, as they have been facing the brunt of cross border firing in J&K.

## International Relations

### 1. Another push at UNSC to ban Azhar

#### Context

- Three permanent members of the United Nations Security Council (UNSC), the U.S., U.K and France, have made a 'listing request' to the UNSC asking for a travel ban, arms embargo and asset freeze on Pakistan-based Jaish-e Mohammad (JeM) leader Masood Azhar.
- The JeM had claimed responsibility for the February 14 suicide attack on an Indian security convoy in Pulwama in Kashmir that killed more than 40 Indian troops.
- China had used its veto power as a permanent member of the UNSC to block previous attempts at sanctioning Azhar (most recently in 2017). This week's attempt is the fourth since 2009 to list the JeM chief.
- The JeM had already been listed by the UNSC as being associated with al Qaeda in October 2001.

#### Jaish-e-Mohammed (JeM)

- JeM is a Deobandi jihadist terrorist group active in Kashmir. The group's primary motive is to separate Kashmir from India and merge it into Pakistan.
- It has carried out several attacks primarily in the Indian state of Jammu and Kashmir. It also maintained close relations with Taliban and Al-Qaeda in Afghanistan and continues to be allied to them.
- Jaish-e-Mohammed is viewed as the "deadliest" and "the principal terrorist organisation in Jammu and Kashmir".
- In 2001, 38 people were killed when a three-member JeM squad blew up a car outside the J&K Assembly.
- In 2016, Jaish was suspected of being responsible for an attack on the Pathankot airbase in India. The Indian government, and some other sources, accused Pakistan of assisting Jaish in conducting the attack. Pakistan denied assisting Jaish, and arrested several members of Jaish in connection with the attack, who were then released by the security establishment

#### United Nations Security Council

- UNSC is one of the six principal organs of the United Nations and is charged with the maintenance of international peace and security.
- Its powers include the establishment of peacekeeping operations, the establishment of international sanctions, and the authorization of military action through Security Council resolutions; it is the only UN body with the authority to issue binding resolutions to member states.
- The Security Council consists of fifteen members. Russia, the United Kingdom, France, China, and the United States—serve as the body's five permanent members. These permanent members can veto any substantive Security Council resolution, including those on the admission of new member states or candidates for Secretary-General.
- The Security Council also has 10 non-permanent members, elected on a regional basis to serve two-year terms.

## GS3 Related Environment

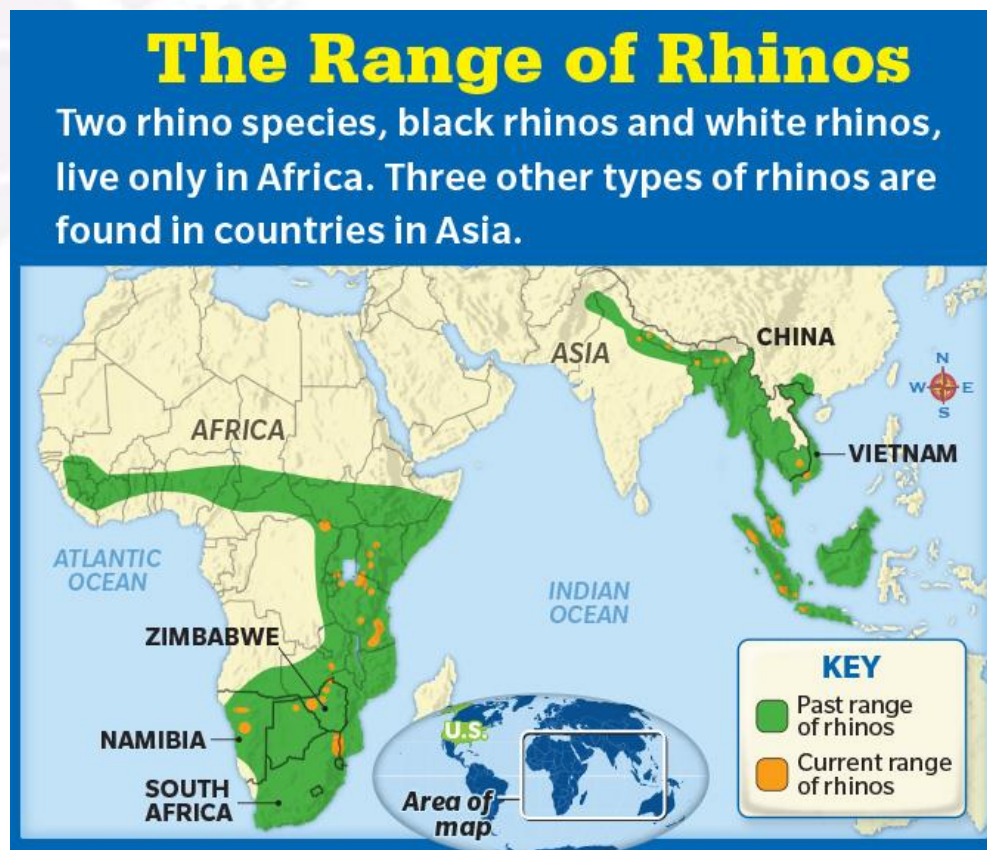
### 1. Rhinos without borders are conservation credo

#### Context

- International boundaries will not come in the way of conservation of rhinos, said representatives of Asian countries where the one-horned herbivore thrives.

#### Details of the initiative

- The New Delhi Declaration adopted at the second meeting of the Asian rhino range countries underscored trans-boundary collaboration among India, Nepal, and Bhutan for the conservation and protection of the greater one-horned rhino.
- There are no rhinos in Bhutan, but some from the Manas National Park in adjoining Assam or Buxa Tiger Reserve in West Bengal are known to cross over occasionally.
- Emphasis was also laid on expanding rhino domains within a country or between rhino range countries. Indonesia and Malaysia are the other Asian countries where the last of the rhinos live.



- The current global population of the Indian one-horned rhinoceros is 3,584. Assam's Kaziranga National Park has the bulk of 2,938 rhinos in India while Nepal 646.
- Once ranging from China to Bangladesh, the Javan and Sumatran rhinos are nearing extinction.
- The Sumatran rhino, the smallest of all rhino species and the only Asian rhino with two horns, became extinct in the wild in Malaysia.
- Among the other decisions taken at the New Delhi meeting of the Asian rhino range countries was "making the best use of all available individuals and technologies" to accelerate natural and conservation breeding of the critically endangered Sumatran rhino.
- Part of the plan has been to replicate or develop upon the Kaziranga rhino conservation success story for Sumatran as well as the Javan rhino. Kaziranga had less than 10 rhinos when it was declared a protected area for the animal in 1905.
- On February 26, the National Rhino Conservation Strategy for India called for active engagement between India and Nepal to protect the species.

### Asian Rhinos

- There are three Asian rhino species, all of which have been pushed to the brink of extinction. The greater one-horned is slowly recovering thanks to years of successful conservation efforts but the Sumatran and Javan rhinos remain at great risk.
- Poaching for their horns and habitat loss are the two greatest threats to the survival of Asia's remaining rhinos.
- Rhinos have been around for millions of years and have a major impact on the structure of their habitat and the health of their ecosystem.
- For example, the greater one-horned rhino helps to maintain close-cropped grasslands near rivers, which are preferable feeding spots for small herbivores. Asian rhinos also disperse the seeds of plants and fruit they've eaten, through their faeces.
- Many other animals – and people – depend on healthy rhino habitats, so protecting the rhino and its habitat helps other wildlife and people.
- All the folds in their skin give Asian rhinos a more armoured look than their counterparts in Africa. The greater one-horned rhino and Javan rhino have one horn, while the Sumatran rhino has two.
- Despite their hefty appearance, Asian rhinos are excellent swimmers and can easily swim across rivers. They're vegetarians, grazing on tall grasses, shrubs, leaves and some fruits.

**GS4 Related**

*Nothing here today!!!*



## Editorials

### International Relations

#### 1. Living on the edge (India-Pakistan Relations)

##### Editorial Analysis:

- Experts opine that the possibility of the ongoing India-Pakistan military stand-off spiralling out of control cannot be overstated, given the high stakes involved with regard to national reputations, military redlines and, most undeniably, domestic political considerations.
- The limited air war over the Line of Control (LoC), shooting down of each other's aircraft and, equally importantly, the capture of an Indian fighter pilot by Pakistan have further complicated what was initially believed to be a crisis that might not go beyond round one (the terror attack in Pulwama and the Indian air strikes on Balakot).
- With the limited air war on the 27th of February, 2019, the two sides completed round two, and it's been anyone's guess what round three may entail.
- The late evening joint press briefing by the three services, held on the 27th of February, 2019, gave no definite indication of de-escalation even though the tone of the conference did not suggest escalation.

##### Mapping the escalation:

- Experts opine that in the days ahead, if there is no clear de-escalation, we are likely to witness more fire assaults on the LoC with high calibre weapons and stand-off strikes without crossing the border using short-range air-to-surface or surface-to-surface missiles against each other.
- In so far as this does not involve more pilot captures, deep strikes in each other's territories and extending to the International Boundary sector, it could still potentially remain contained.
- However, as they say, miscalculations and mistakes can easily take place in the fog of war whereby the stand-off could move up the next rung of escalation.

##### Rising up the escalatory ladder: A Wrap on Events

- Let's take a step back and recapture how we got to two rungs up the escalatory ladder.
- To begin with, by carrying out a daring air strike deep inside the Pakistani mainland, India crossed the redline, from the Pakistani point of view.
- This meant clear and present reputational damage for the Imran Khan government as well as the Pakistan military.
- Their retaliatory strike against India was something they felt compelled to undertake.
- On the Indian side, coming in the run-up to the general election, the Bharatiya Janata Party (BJP)-led government couldn't have but responded to a terror attack that took the lives of 40 of its men in uniform.
- A military response was expected, but some experts have opined that choosing to strike inside mainland Pakistan was perhaps not wise.
- But then, New Delhi's war planners were also trying to stretch the success of the surgical strikes of 2016 (since Pakistan didn't respond to them) by extending its scope beyond Pakistan-occupied Kashmir (PoK), a strategy that may not have panned out as planned.

##### A Deeper Perspective:

- From a more conceptual point of view, by carrying out a strike against Pakistan in its **Khyber Pakhtunkhwa province**, India wanted to create a new military normal between the two sides, i.e. counter-terror air strikes inside Pakistan would now be a regular feature, something, one could argue, straight out of the American and Israeli counter-terror playbooks.
- If Pakistan had faked ignorance of an attack in Balakot, which it initially did, or decided not to respond to it, India would have set the new military normal in stone.
- Moreover, yet another denial from Rawalpindi would have run the risk of Pakistan's military threats being rendered hollow and the associated conventional and nuclear bluffs being called, in full public view.
- As a matter of fact, knowing fully well the implications of a non-response, Pakistan therefore opted for, a minimal air strike across the LoC.

### A Look at Terminologies:

- Experts have opined that what further complicated matters for the Pakistani war planners was India's use of the phrase '**non-military pre-emptive strike**'.
- Some experts point out that while the term 'non-military' was meant to signal to Pakistan that the attack was against the terror camp and not against its military, the 'pre-emptive' part was unacceptable to the Pakistani side.
- A successful, and un-responded to, Indian pre-emptive strike, once again from the American playbook, would have meant that India could now keep the option of striking anywhere inside Pakistan to take out terror camps which it believes poses a threat to India.
- We must recall that the 2016 surgical strikes were projected as a 'retaliatory strike' than a 'pre-emptive one', unlike the attack on Balakot. That again, would have been a major problem for Pakistan.
- Some critics opine that much of the recent escalation is the fallout of a misplaced Indian belief that it could change the military normal between the two sides, and the Pakistani refusal to let that happen.
- To that extent, if the crisis doesn't escalate any further, Pakistan would have successfully dissuaded India from altering the status quo.

### Signalling restraint? A Perspective

- Given the fact that round two of the military engagement so far has been confined to the LoC skies, it is possible to argue that the two countries want to keep the engagement limited with the possibility of some air skirmishes and then perhaps call it quits.
- If the limited spatial scope of the strikes is indeed intentional, and not just a result of Pakistan limiting its attacks above the LoC, we could potentially look forward to more signalling for de-escalation, in addition to Pakistan's announcement that the captured IAF pilot, Abhinandan Varthaman, would be released "**as a gesture of peace**".
- And yet, there are several challenges to this assessment. For example, India did not gain any military advantage over Pakistan in round two, which makes it difficult for New Delhi to claim victory.
- More so, Pakistan's custody of an Indian pilot has made New Delhi look weak, and the BJP-led government certainly would not want to look weak in the run-up to the general election.
- Further, given that the first conventional shot was fired by India (even as the trigger was the terror attack in Pulwama), would it be possible for India to get off the escalation ladder with Pakistan taking the high moral ground with Wing Commander Varthaman's release?
- Equally important is the issue of how either side can convey to the other a desire for de-escalation without being seen as blinking first, if indeed there is a desire for de-escalation.

- Experts opine that at the end of the day, the BJP needs a victory over Pakistan, which the latter will not give without a war of attrition and the attendant dangers of escalation. India may not want to go down that long-drawn-out path of uncertain outcomes, certain damage and difficulties of spinning narratives of victory and loss in the age of social media and instant communication, and with the Opposition ready to pounce on it.

#### On a de-escalation plan: A Perspective

- For arch-rivals such as India and Pakistan, public commitment on de-escalation is not a charming option given the potential future narratives about humiliation.
- Further, third party mediation also looks easier said than practised — Islamabad might not trust Washington as a neutral mediator, Moscow might not have enough interest, and Beijing's good offices will not find any takers in New Delhi.
- Further, it is important to note that **unless there is some creative way the U.S. can discreetly mediate between the two countries, third party mediation is looking difficult.**

#### Concluding Remarks: The Way Forward

- Experts opine that the other easier option is to open back-channel negotiations between the two sides.
- This has precedent in the India-Pakistan context.
- As a matter of fact, there were quiet back channel negotiations between Islamabad and New Delhi at the height of the Kargil conflict, even as the U.S. was trying to defuse tensions.
- In conclusion, experts opine that if indeed the two countries are keen on taking this road, they would need to immediately send their respective back-channel emissaries, preferably to a third country, to hold discreet talks on how to de-escalate.
- They would need to work out a solution which will be seen as a win-win deal even if in reality it might not be exactly so.

## INDIAN ECONOMY

### 1. Time to usher in the EV revolution (Ushering the electric vehicle revolution)

#### Editorial Analysis:

##### Introduction:

- The air quality in our cities is deteriorating at an alarming rate.
- It is important to note that today, 14 out of the 15 most polluted cities in the world are in India.
- Experts have opined that if left unchecked, we are staring not only at severe health costs but also losing highly skilled work force to migration abroad.
- It is important to note that transportation is an outsized contributor to this situation, if not the sole one.

#### Battery electric vehicles (BEVs): A Solution

- **Battery electric vehicles (BEVs)** are an integral part solution to this problem, which justifies strong public support for their adoption.
- However, despite generous tax subsidies, and other forms of support, adoption is not occurring at the pace and scale needed to have a meaningful impact on oil imports and urban air quality.

- Further, subsidies have proven unsustainable even for the wealthy countries (e.g. Norway). Nevertheless, there is reason for optimism.
- Experts have opined that the basic point here is that policymakers should recognise some new realities, and tweak our policies to take full advantage of such facts.

### Global Trends: A Perspective

- Two recent economic developments justify an even more aggressive but a smarter policy agenda.
- Firstly, is the dramatic reductions in the global cost of battery storage.
- It is important to note that the last decade has witnessed a six-fold reduction in the international price of Li-ion storage batteries (about \$1000 per kilowatt hour (kWh) in 2010 to about \$170 per kWh in 2018).
- As a matter of fact, this has substantially mitigated the disadvantage of BEVs in terms of upfront cost and propelled them ahead of other zero emissions technologies, the most notable being hydrogen fuel-cells.
- Indeed, BEVs cause pollution during power generation, and during battery production and disposal.
- **It is, therefore, imperative we decarbonise electricity and ensure the batteries are environmentally sustainable.**
- Second, is the fall in cost of solar and wind electricity as evidenced in the prices discovered in repeated auctions by the **Solar Energy Corporation of India**.
- An important question arises: What is a smarter way to ushering in the electric vehicle revolution?

### Smart Ways of ushering the electric vehicle revolution: A Perspective

- A central feature of such an approach is targeting electrification of those vehicle segments that offer the greatest environmental and socio-economic return on investment.
- The basic reality is that more intensive the utilisation (i.e., more kilometers/day) of a BEV, greater are its fuel cost savings and environmental benefits.
- This means a focus on commercial vehicles over private household vehicles.
- Further, in contrast, **BEV policies world-over have prioritised adoption by private households.**
- It is important to note that city bus fleets are the ideal first segment for full electrification given their straightforward charging infrastructure demands (install fast chargers at bus stations).
- Also, a study by University of California Los Angeles (UCLA) and Lawrence Berkeley National Lab (LBNL), concludes BEVs would not only improve air quality but also increase ridership and revive loss-making bus agencies.
- Alongside buses, taxi fleets (Uber, Ola, Merucabs etc), and short- and medium-haul light commercial trucks and delivery vans that mostly operate within city-limits are ripe for electrification right away.

### Changes that need to take place:

- Realising the above dream hinges foremost on the establishment of a widespread, reliable, network of fast-chargers within cities and along highways, which is the second key task for government.
- Further, as important as vehicle subsidies might be, this should not compromise expenditure on creating infrastructure. For until such an infrastructure is in place, it is hard for private businesses and households to delay adopting new technologies.
- **Research by LBNL and UCLA** shows also that both the physical footprint and the amortised cost per mile of a reliable fast-charging network for a large city are modest and decline dramatically with scale and intensive utilisation.

- Next, it is important to note that while city bus fleets followed by other intra-city commercial vehicles are the simplest and cheapest to electrify first given their well-defined range of use, with more than 50 per cent of India's oil consumption is for long-haul trucking and more than 80 per cent of the bus fleet plying on inter-city routes, **we also simultaneously need to begin electrification of highways.**

#### **Five concrete yet broad policy interventions to realise this vision:**

1. **100 per cent EV pilots:** Experts have opined that the need currently is to select a few major cities and select major state and national highway corridors to serve as pilots that demonstrate both the technical feasibility and economic viability of 100 per cent electrification of city buses and commercial taxi fleets and a reasonable share of inter-city buses and trucks.
  - The cost of these pilots can be reduced by aggregating demand from all across the country and centrally procuring and allocating the vehicles and infrastructure equipment at scale using public auctions.
2. **Building of infrastructure:** Having identified the locations for pilots, the next step is to fund the building of the fast-charging infrastructure.
  - In fact, at this stage it is prudent to somewhat over-build this infrastructure to ensure reliability and ease of access at the expense of being under-utilised given the high stakes of this venture.
  - It is also essential to ensure that this infrastructure benefits from the revolution in renewable electricity markets.
3. **Subsidy targeting:**
  - Further, to reduce the total burden on public finances, the subsidy regime needs to be reformed to ensure that the vast majority of the vehicle subsidies are directed to high-mileage vehicles with a substantial portion allocated to city bus fleets given the environmental imperative and their potential to revive public transportation.
  - At the same time, there is merit to continuing some support to adoption by private households in both the two- and four-wheeler markets.
4. **Industry buy-in:**
  - In order to ensure that the public investments in infrastructure and subsidies are put to their full and best use, we should require that both public transportation agencies and private operators of commercial vehicles (taxis, buses and trucks) commit to mandatory targets for electrification of a certain share of their total annual kilometres travelled or serviced to be derived from BEVs.
5. **Make in India:**
  - The above efforts must be complemented with supporting policies to ensure that in the long run we do not end up swapping oil imports and fuel insecurity for battery imports. This could be achieved by using a combination of carefully designed mandates and targeted subsidies that balance strategic objectives and flexibility for private industry.

#### **Concluding Remarks:**

- In conclusion, we have never had a better chance to forge a sustainable future, one that is not captive to a scarce, toxic, and inequitable natural resource whose future is under our feet and not over our heads.



## 2. Is India ready for the post-diesel era?

### Editorial Analysis:

#### A Brief Background:

- The diesel engine has never faced such an existential crisis.
- Across the world its popularity as a powertrain for passenger vehicles is on the decline.
- Europe, its biggest market (53 per cent of all cars sold is powered by diesel), is fast giving up on the fuel it favoured the most till recently.
- France, where diesel cars account for 70 per cent of its overall fleet, saw more petrol cars being sold in 2017.
- In neighbouring Germany, the share of diesel cars fell from 48 per cent in 2012 to 33 per cent in 2018.
- Experts have opined that what compounds matters are the tightening emission norms which appear to be sounding the death knell for diesel engines around the world.

#### The Indian Perspective:

- India too will be impacted by this development and it needs to act appropriately to manage the transition.
- Further, India's love for diesel powertrains peaked in 2012-13.
- That was a time when diesel cars accounted for 47 per cent of all passenger vehicles sold in the country.
- This fad was driven more by cheaper diesel prices (it was lower than petrol by as much as ₹25 per litre) than for any other reasons.
- That changed when the government de-controlled diesel prices in October 2014.
- As the price differential between diesel and petrol narrowed, the equation changed.
- **Today, only 23 per cent of the cars sold have diesel powertrains.**
- It is important to note that **the Indian government's decision to leapfrog from BS-IV to BS-VI emission norms directly, will impact diesel engines the hardest and will force India to promote electrification and hybridisation more seriously.**
- It will also be forced to re-imagine public transportation and movement of goods by road.
- Globally the initial stages of emission norms focussed on carbon-di-oxide emission. Euro-I to Euro-4 emission norms did just that. Diesel engines performed well on this account as they emitted lower CO<sub>2</sub> and this saw most European countries promoting diesel cars with incentives.
- However, **as emission norms evolved, it became clear that particulate matter (PM) and Oxides of Nitrogen (NO<sub>x</sub>) were equally dangerous.**
- This ended diesel engines' dream run as they emit higher levels of PM and NO<sub>x</sub> than petrol engines.
- Euro-V norms that were introduced in 2010 focussed on reducing PM while Euro-VI norms that came into force in 2015 targeted NO<sub>x</sub>.

#### A Costly exercise

- As India chose to go directly to BS-VI from April 2020, the manufacturers have to tackle both PM and NO<sub>x</sub> in one go.
- That is not easy as it involves a complex exhaust system such as a **selective catalytic reduction (SCR)** and a tail pipe particulate filter to reduce NO<sub>x</sub> and PM in line with BS-VI norms. SCR does this

by converting NOx to nitrogen by pumping in liquid urea to react with the exhaust while the filter reduces the PM coming out of the vehicle to the required level.

- This system will cost upwards of ₹1.50 lakh depending on the size of the engine.
- Such cost escalation will price small, compact and entry level diesel sedans out of the market.
- Only pricey SUVs will be able to absorb this cost.
- Further, come April 2020, the share of diesel cars in India will see another significant drop in the volume segment.
- **This poses multiple challenges for the manufacturers, especially those who have set up large diesel engine capacity. They will have to compensate for fall in domestic demand by pushing exports.**
- The fact that India will be on a par with the developed world in terms of emission norms will help as it opens up a large export market for them.
- Predominantly diesel car manufacturers will have to change tact.
- Mahindra & Mahindra is looking at petrol engine options across all its models barring Bolero. Tata Motors too will have to do the same.

#### A Possible Shift to petrol?

- It is important to note that shifting to petrol powertrains will open another front for the manufacturers — the CAFE norms (The Corporate Average Fuel Efficiency norms).
- The Corporate Average Fuel Efficiency norms, that came into force from April 2017, mandates that average corporate CO2 emission be less than 130 gm per km till 2022 and below 113 gm per kilometre thereafter.
- Experts opine that manufacturers can meet the CAFE norms only by producing more fuel efficient petrol cars or electric/hybrid vehicles.
- Electrification will definitely help but in India where bulk of the cars sold are small cars, the cost may just not work out.
- Though battery costs have come down substantially over the years, it is still not low enough by Indian standards.
- A compact car will typically need a 20 kWh battery and considering that 1 kWh battery costs \$150 or more, an electric powertrain alone will cost ₹4-5 lakh.
- That is probably the reason Maruti Suzuki is focussing a lot more on hybrids. Under the circumstances, denying tax breaks — that electric vehicles enjoy — to hybrid vehicles appears irrational.

#### A Green push:

- Experts opine that the government should catalyse this shift to green vehicles by offering technology agnostic incentives.
- Its vision of 100 per cent electrification of passenger vehicle sales by 2030 may be aspirational but achieving even a third of that target would bring about a massive change. Leapfrogging to BS-VI norms has, in a way, set the tone for it.
- The government can speed up things by coming out with Faster Adoption and Manufacturing of Electric Vehicles (FAME) – 2 norms which should incentivise the manufacturer rather than the buyer.

- Further, costlier diesel engines will also increase the cost of public and goods transportation. Policies therefore should push buses with urban applications (city buses and corporate fleet) to embrace electrification.
- As regards goods movement, the only option is to reduce the heavy share of road transportation by focussing on coastal shipping and use of inland waterways to move goods.
- The transition away from diesel is inevitable. Faster the government and India Inc realise this and act, smoother will be the transition.

## Tidbits

### 1. TikTok fined \$5.7 mn in U.S. for illegally gathering children's data

- The fast-growing, Chinese-owned video sharing network TikTok agreed to pay a \$5.7 million fine to U.S. authorities to settle charges that it illegally collected personal information from children, officials said.
- The U.S. Federal Trade Commission said the penalty by the social network was the largest ever in a children's privacy investigation.
- The social network, which has been surging in popularity with young smartphone users and taking over from rivals like Facebook, Instagram and Snapchat, failed to obtain parental consent from its underage users as required by the Children's Online Privacy Protection Act.
- "The operators of Musical.ly — now known as TikTok — knew many children were using the app, but they still failed to seek parental consent before collecting names, email addresses, and other personal information from users under the age of 13," said FTC chairman Joe Simons. "This record penalty should be a reminder to all online services and websites that target children."
- According to the FTC, the company required users to provide an email address, phone number, user name, first and last name, a short biography and a profile picture.
- Officials said the company knew that many of its users were under 13 and should have taken greater precautions. TikTok said in a statement it would create a "separate app experience" for younger users with additional privacy protections.

### 2. EC allows 11 documents to prove voters' identity

- The Election Commission said those not having their Electors Photo Identity Cards can now show any of the 11 alternative documents, including Aadhaar card, for exercising their franchise. Henceforth, photo voter slip will not be accepted as a standalone identification paper.
- The documents accepted are passport, driving licence, service identity cards of the Central and State governments, public sector undertakings and public limited companies, bank or post office passbooks carrying photographs of voters, PAN card, smart cards issued under the National Population Register, MNREGA job card and health insurance smart card.
- Pension documents with photograph, official identity cards issued to the legislators and Aadhaar card have also been included.
- The Commission, in its order, said minor discrepancies in the voters' identity card should be ignored, provided the identity of the elector can be established by the card.

- If an elector produces a card issued by the Electoral Registration Officer of another Assembly constituency, such card will be accepted provided the name of that elector finds place in the electoral roll pertaining to the polling station concerned.

## UPSC Prelims Practice Questions

1) Ancient City of Sabratha has been in news recently. It is in –

- (a) Syria
- (b) Iraq
- (c) Libya
- (d) Jordan

Answer - c

Explanation: Ancient City of Sabratha is located west of Tripoli in Libya's Mediterranean Coastal area. It is one of three former cities that constituted Roman Tripolitania. It was declared as a World Heritage Site by UNESCO. In 2016, UNESCO classified it as an "Endangered" site along with four other Libyan sites on its World Heritage list. The listing is because of great damage caused by armed groups and excavation and smuggling of antiquities due to lack of security.

2) Consider the following statements with reference to Nobel Prize 2018

1. The Nobel Physics Prize 2018 has been given for inventing optical lasers.
2. The optical lasers have paved the way for advanced precision instruments used in corrective eye surgery.

Which of the above statement(s) is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None of the above

Answer - c

Explanation - Three scientists won the Nobel Physics Prize for inventing optical lasers that have paved the way for advanced precision instruments used in corrective eye surgery. Arthur Ashkin of the U.S., Gerard Mourou of France and Donna Strickland of Canada are the winners.

3) Human Capital Index (HCI) is released by

- (a) World Bank
- (b) World Economic Forum
- (c) United Nations Development Programme
- (d) World Trade Organisation

Answer - a

Explanation: The World Bank has released a Human Capital Index (HCI) as part of the World Development Report 2019. The theme of this year's world development report is "The Changing Nature of Work".

4) The government has recently granted Geographical Indication (GI) tag to the Alphonso Mango from-

- Bihar
- West Bengal
- Maharashtra
- Madhya Pradesh

Answer - c

Explanation: The government has recently granted Geographical Indication (GI) tag to the Alphonso Mango from Ratnagiri, Sindhudurg and other adjoining areas in Maharashtra. Alphonso, the king of Mangoes, better known as 'Hapus' in Maharashtra, is in demand in domestic and international markets for its taste, pleasant fragrance and vibrant colour.

## UPSC Mains practice Questions

1. The impact of climate change will affect India's food security, while reducing fodder supplies for our livestock. Prudent investments and policy reform can help make India resilient to climate change. Discuss (10 Marks; 150 words)
2. The Atal Tinkering Laboratories (ATLs) are at the vanguard of the promoting scientific temper and an entrepreneurial spirit in children today. Explain (10 Marks; 150 words)



