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## INSIGHTS into EDITORIAL

# MARCH 2017



## Table of Contents

<b>INSIGHTS into EDITORIAL</b>	<b>2</b>
02/03 - NOTA and the Indian voter	2
03/03 - Food on its own terms	3
04/03 - Campaigning on a budget	4
06/03 - Chewing the cud	6
07/03 - Bharat Stage-VI in 3 years: Race over speedbumps	8
08/03 - All those who are out of the tax net	10
09/03 - How to tame our forest fires ?	12
10/03 - Staying cool	14
13/03 - The curious case of Justice Karnan and its implications for higher judiciary	16
14/03 - Allowing for a sibling	19
15/03 - The economics of maternity leave	20
16/03 - How Nagas Perceive the Creation of Seven Additional Districts in Manipur	22
17/03 - Credibility of Electronic Voting Machines	24
18/03 - Are injectable contraceptives advisable?	27
20/03 - Low, stagnating female labour-force participation in India	29
21/03 - The need for a business cycle dating committee	31
22/03 - What goes around must come around	33
23/03 - Breathing life into health care in India	34
24/03 - Do we need a presidential system?	37
25/03 - One India, two time zones	40
27/03 - The river as being	42
28/03 - The mistrust of Science	44
29/03 - Why India needs a new logistics network?	47
30/03 - The dragon at the NSG high table	49
31/03 - Is Aadhaar a breach of privacy?	50

## INSIGHTS into EDITORIAL

### 02/03 - NOTA and the Indian voter

#### Summary:

The Supreme Court, in September 2013, upheld the right of voters to reject all candidates contesting the elections, saying it would go a long way in cleansing the political system of the country. The apex court directed the Election Commission to have an option of 'None Of The Above' (NOTA) on the electronic voting machines (EVMs) and ballot papers in a major electoral reform.

Thus, India became the 14th country to institute negative voting. However, NOTA in India does not provide for a 'right to reject'. The candidate with the maximum votes wins the election irrespective of the number of NOTA votes polled.

#### How is a NOTA vote cast?

The EVMs have the NOTA option at the end of the candidates' list. Earlier, in order to cast a negative ballot, a voter had to inform the presiding officer at the polling booth. A NOTA vote doesn't require the involvement of the presiding officer.

#### There was a similar provision before NOTA. What was it?

Before the NOTA option came in existence, people casting negative votes were required to enter their names in a register and cast their vote on a separate paper ballot. Under Section 49 (O) of the Conduct of Elections Rules, 1961, a voter could enter his electoral serial number in Form 17A and cast a negative vote. The presiding officer would then put a remark in the form and get it signed by the voter. This was done to prevent fraud or misuse of votes. This provision was, however, deemed unconstitutional by the SC as it did not protect the identity of the voter.



#### NOTA usage:

NOTA polling figures are still small. On an average, the maximum NOTA vote share has not crossed 2.02% of the total votes polled in any election cycle. The perceived cynicism of Indian voters against the political class thus seems exaggerated. However, it is worthwhile to look at the patterns of NOTA voting to find out how the voters have used this option of negative voting.

- NOTA button saw its debut in the 2013 Assembly elections held in four States — Chhattisgarh, Mizoram, Rajasthan and Madhya Pradesh and the former Union Territory, Delhi. In these States and Delhi, NOTA constituted 1.85% of the total votes polled. The average NOTA vote share dropped to 0.95% in the 2014 Assembly elections held in eight States — Haryana, Jharkhand, Andhra Pradesh, Sikkim, Odisha, Arunachal Pradesh, Jammu & Kashmir and Maharashtra.
- It increased to 2.02% in the 2015 Assembly elections held in Delhi and Bihar. While Delhi polled a mere 0.40%, Bihar saw 2.49% of NOTA votes, which remains the highest NOTA votes polled so far in any State in Assembly elections.
- In the 2016 Assembly elections held in Assam, West Bengal, Kerala, Puducherry and Tamil Nadu, NOTA vote share dropped again to 1.6%.
- In the 2014 Lok Sabha polls, NOTA constituted 1.1% of the total votes. Across the elections, the number of NOTA votes polled was larger than the winning margin in 261 Assembly constituencies which went to the polls since 2013, and in 24 constituencies in the Lok Sabha elections.

- One can argue that in these constituencies the NOTA votes did make a difference to the election results assuming that in the absence of this option a majority of NOTA voters would have preferred one or the other candidate in the fray.

### **What can we infer from the above data?**

- Reserved constituencies have seen a relatively larger number of NOTA votes, which points to the continued social prejudice against political reservation for SC/STs.
- Constituencies affected by left-wing extremism have also recorded higher NOTA performance and here probably it served as an instrument of protest against the State itself. It is important to note that these voters have used the democratic means of NOTA to express their resentment rather than boycotting the polls outright.
- NOTA figures are comparatively higher in those constituencies which have seen a direct contest between the Congress and the Bharatiya Janata Party. One may read into this some indication of the people's disenchantment with two mainstream political parties and yearning for alternatives.
- Overall, Indian voters seem to be using NOTA not just to show their disapproval of the candidates in the fray but to express their protest against many things they perceive wrong in the political system.

### **Why have NOTA if there's 'no electoral value'?**

NOTA gives people dissatisfied with contesting candidates an opportunity to express their disapproval. This, in turn, increases the chances of more people turning up to cast their votes, even if they do not support any candidate, and decreases the count of bogus votes. Also, the Supreme Court has observed that negative voting could bring about "a systemic change in polls and political parties will be forced to project clean candidates".

### **Why NOTA is good?**

- NOTA option will force the political parties to select the honest candidates, i.e with no criminal records.
- NOTA ensures people's 'right to freedom of speech and expression'.
- The disadvantage of 49-O will be overcome with the implementation of NOTA.
- This will increase the polling percentage.

### **Conclusion:**

The early trends of NOTA need to be explored further with more elaborate statistical and ethnographic analysis. So far, a small number of Indian voters have come to see NOTA as an instrument of protest. This electoral option will become a meaningful means of negative voting only if it becomes a 'right to reject' rather than being a symbolic instrument to express resentment as it is now. A PIL has already been filed in Madras High Court seeking the full right to reject in place of NOTA.

## **03/03 - Food on its own terms**

### **Summary:**

Kerala is said to be in the middle of food crisis. The Chief Minister of Kerala recently met the Prime Minister and sought a greater allocation of rice to the State. It is surprising to see that a State once identified by the wealth of its agriculture has been brought to the sorry state whereby its Chief Minister must travel to Delhi to ensure that his people are properly fed. Experts opine this can only reflect the failure of public policy.

### **What are the reasons behind this scarcity?**

In the early seventies, following the boom in the Arabian Gulf region, the State saw a new form of emigration. While Kerala had long witnessed the migration of the educated for want of opportunities domestically, for the first time there was a significant outflow of manual labour, some of it from agriculture.

- While it was only the men who migrated, the higher incomes transformed the households socially, and the women too withdrew from the labour market. This hit paddy cultivation most as, in an age-old sexual division of labour, women were disproportionately represented in the planting and harvesting of paddy.
- The sector began to face severe labour shortage. Naturally, the wage rose and the cultivation of paddy was no longer viable as cheaper rice came in from the rest of India.
- Also, in abolishing tenancy the land reforms had extinguished the traditional landlords but did not inevitably transfer land to those who actually laboured on the field. Besides, leasing was also made unlawful by the Land reforms act.

### **Concerns:**

At the time of its legislation, tenancy had been a symbol of the exploitation of the peasantry who were held down by the possibility of eviction at will. But now, close to half a century later, when the economic position of owners of small parcels of land pales beside the owners of urban property in the State, to hold on to an archaic law for its symbolic value is mere sentimentality. It is unimaginative of a public policy to not remove all barriers to the leasing of land so that smaller portions can be pooled to form larger operational holdings and paddy production becomes viable again.

It is also interesting that the law discourages tenancy as unlawful but is sanguine about the alienation of agricultural land to other purposes. Actually, there is legislation meant to address this but its implementation is hostage to party politics at the village level, and the alienation of Kerala's precious agricultural land continues.

### **What needs to be done now?**

There has been the alienation of agricultural land in the state. Kerala needs a land use policy that conserves every bit of its natural capital. As part of this, the State could consider acquiring all unused paddy land and making it available to the Adivasis on long-term lease. This would ensure its preservation, saving Kerala from the hardship that is assured if the present situation of more plastic than grain clogging the rice paddies continues.

Kerala also needs a new politics if its economy is to adjust to the emerging scenario of rising food prices and a shrinking Gulf economy which is sure to impact livelihoods. Public policy is likely to adapt only if political parties are pressurised by a citizenry alerted to the limits to distributivism.

### **Conclusion:**

Kerala is rare among the world's economies, barring Zimbabwe, where agricultural production actually declined after land reforms. It is quite extraordinary that public policy in Kerala has not addressed the problem of a declining production of its staple food, a trend in evidence for nearly half a century by now. If the State is to remain an autonomous entity, it must reduce all forms of one-way dependence, even vis-à-vis the Indian Union. A far firmer base of food production would be one aspect of this. In a world of creeping climate change, the global supply of food is set to shrink.

## **04/03 - Campaigning on a budget**

### **Summary:**

There is a considerable body of thinking in India that political funding is the nodal centre of unaccounted and illicit money transfers, and is the primary cause of corruption of the body politic. In this context, experts have suggested to go for publicly-funded elections.

### **Background:**

According to a recent resort to the Right to Information Act, the Association for Democratic Reforms found that the total income of all political parties in India from 2004-05 to 2014-15 was ₹11,367.34 crore. The report revealed that 69%, of the income of political parties come from unknown sources, and this segment has been steadily on the rise. Between 2004-05 and 2014-15 the average income of all the political parties in India was just over ₹1,000 crore, and comes to about ₹2,000 crore at present annually.

## **What is state or public funding of elections?**

This means that government gives funds to political parties or candidates for contesting elections. Its main purpose is to make it unnecessary for contestants to take money from powerful moneyed interests so that they can remain clean. In some countries, state funding is extended to meeting some specific forms of spending by political parties, not confined to electioneering alone. Countries keep changing laws relating to state funding depending on experience and financial condition.

## **Why public funding is good?**

- Political parties and candidates need money for their electoral campaigns, to keep contacts with their constituencies, to prepare policy decisions and to pay professional staff. Therefore, public funding is a natural and necessary cost of democracy.
- Public funding can limit the influence of interested money and thereby help curb corruption.
- Public funding can increase transparency in party and candidate finance and thereby help curb corruption.
- If parties and candidates are financed with only private funds, economical inequalities in the society might translate into political inequalities in government.
- In societies where many citizens are under or just above the poverty line, they cannot be expected to donate large amounts of money to political parties or candidates. If parties and candidates receive at least a basic amount of money from the State the country could have a functioning multi-party system without people having to give up their scarce resources.

## **Why are some people opposed to this idea?**

There are divergent views on the efficacy of state funding of elections. Some have been dismissive of the idea. Those against this idea wonder how a Government that is grappling with deficit budgets, can provide money to political parties to contest elections.

- They also warn that state funding would encourage every second outfit to get into the political arena merely to avail of state funds.
- Also, given that state expenditure on key social sectors such as primary healthcare is “pitifully small”, the very idea of the Government giving away money to political parties to contest polls, is revolting. Therefore, opponents ask the government to channelize public resources towards and not diverted from such essential services.

## **Why it is difficult to go for public funding?**

The funds that a political party advances to its party candidates in an election vary from one candidate to another, and there is much variation across political parties in this regard. In the 2014 Lok Sabha elections, 263 members of the House claimed that they received a total of ₹75.59 crore from their parties, which averages out to roughly ₹28 lakh each. However, it is believed that an MLA spends on an average about ₹5 crore to get elected. The legal limit of ₹28 lakh is far off this mark.

- Assuming that there are five contending candidates in a constituency, and even if each one of them does not spend as much, but just half of their elected counterpart, an amount of about ₹15 crore will be spent in each constituency, which with about 4,215 MLAs in India works out to an about ₹13,000 crore per annum.
- While the legal limit that a Lok Sabha candidate can spend is ₹70 lakh, a victorious candidate on an average does not spend less than ₹10 crore for the purpose. Suppose we assume again an average of five candidates per constituency, and halving the amount to losers, about ₹30 crore will be spent in each Lok Sabha constituency, and given 543 members of the Lok Sabha, about ₹3,300 crore per annum.
- Then there are elections to the Upper Houses, both at the Centre and in some States, and the local governing bodies. Hence, it is argued that public funding places unnecessary burden on the exchequer.

## Way ahead:

The key to regulate political funding lies in bringing down election expenditure and ensuring that it provides an opportunity to get the best public men and women to participate in the institutional life of Indian democracy. One of the ways suggested for the purpose is holding simultaneous elections to the Lok Sabha as well as the State Assemblies. In the longer run, political patronage itself needs to be reined in. This calls for not merely a decentralisation of power in more substantive ways, but also reordering the relation between the legislature and executive.

## Conclusion:

It isn't India alone that has been struggling with the idea of state funding of political parties; other democracies too have grappled with it. Some like Finland, Italy, Israel, Norway, Canada, the US, Japan, Australia and South Korea implemented the concept with mixed results. Italy, Israel and Finland, for instance, did not see any significant reduction in state expenditures due to public funding, despite the many checks and balances. In most of these countries, the argument against state intervention has been that political parties, being a free association of citizens, are independent entities, and that they cannot be bound by financial strictures. It's an argument that can well be applied to India by anti-state interventionists.

## 06/03 - Chewing the cud

### Summary:

Dairying has become an important secondary source of income for millions of rural families and has assumed the most important role in providing employment and income generating opportunities particularly for marginal and women farmers.

- India ranks first among the world's milk producing Nations since 1998 and has the largest bovine population in the World. Milk production in India during the period 1950-51 to 2014-15, has increased from 17 million tonnes to 146.3 million tonnes as compared to 137.7 million tonnes during 2013-14 recording a growth of 6.26 %.
- FAO reported 3.1% increase in world milk Production from 765 million tonnes in 2013 to 789 million tonnes in 2014. The per capita availability of milk in the country which was 130 gram per day during 1950-51 has increased to 322 gram per day in 2014-15 as against the world average of 293.7 grams per day during 2013. This represents sustained growth in the availability of milk and milk products for our growing population.

### Significance of cow and cow based products:

The cow-based rural economy and the use of five key products from cow called **Panchgavya — milk, curd, ghee, dung and urine** — is a part of daily life in the Subcontinent. The use of Panchgavya in food, medicine, agriculture, etc. is already in practice in various parts of rural India.

- Worldwide, substantial research has been done highlighting the medicinal significance of **A2 milk produced by indigenous cows, which prevents disorders like obesity, arthritis, type 1 diabetes among children, autism**, etc. Curd and buttermilk have been found useful in many gastrointestinal disorders and are recommended as a food practice in ayurveda.
- Globally, scientists are facing the challenge of multiple drug resistance in micro-organisms, presence of antibiotic residues in the food chain, associated allergies, etc. It is been scientifically proven that most of the modern-day systems use antibiotics and steroids, leading to weakening of innate immune-efficiency. A WHO report mentions antibiotics will become almost ineffective over the next two decades. In the light of this, research into sustainable alternatives is being carried out globally. Two US **patents on cow urine have been granted for its medicinal properties**, particularly as a bioenhancer and as an antibiotic, antifungal and anticancer agent.
- It is traditionally believed that **cow dung has antiseptic, anti-radioactive and anti-thermal properties**. Only about 40% of the dung from cows is used as fuel in rural areas. The quantity of dung used annually in the existing 2.7 million family type biogas plants is estimated to be 22 tonnes. Traditionally, cow-dung cakes are used for food preparation and while burning these cakes, the temperature never rises beyond a certain point; ensuring

overheating does not destroy the nutrients in the food. The use of **cow-dung in biogas as a non-fossil fuel is being considered for vehicles and cooking.**

### What has the government done in this regard?

Government of India is making efforts for strengthening the dairy sector through various Central sector Schemes like “National Programme for Bovine Breeding and Dairy Development”, National Dairy Plan (Phase-I) and “Dairy Entrepreneurship Development Scheme”.

- The restructured Scheme **National Programme for Bovine Breeding and Dairy Development (NPBBDD)** was launched by merging four existing schemes i.e. Intensive Dairy Development Programme (IDDP), Strengthening Infrastructure for Quality & Clean Milk Production (SIQ&CMP), Assistant to Cooperatives and National Project for Cattle & Buffalo Breeding with the budget provision of Rs.1800 crores for implementation during 12th Plan.
- In order to meet the growing demand for milk with a focus to improve milch animal productivity and increase milk production, the Government has approved **National Dairy Plan Phase-I (NDP-I)** in February, 2012 with a total investment of about Rs.2242 crore to be implemented from 2011-12 to 2016-17. NDP-I will help to meet the projected national demand of 150 million tonnes of milk by 2016-17 from domestic production through productivity enhancement, strengthening and expanding village level infrastructure for milk procurement and provide producers with greater access to markets.
- ‘**Rashriya Gokul Mission**’, aims to promote locally bred cows as they are better suited for the Indian climate and are even heat resistant. Thus, by switching to purely locally bred cows over cross-bred, it aims to increase the output of milk. This scheme aims to even maintain the cows after they have passed their milk producing stage, to be utilised for meat. Even the cow dung and cow urine will be utilised. It will be promoted as organic manure and for other purposes, such as for biogas to produce electricity. In order to make the farmers motivated towards the new scheme, those that maintain the best cow centres will be awarded “Gopal Ratna” awards. Each cow will be given a unique identity number and all the records will be maintained in a national database.

### Challenges:

India’s indigenous cattle population has fallen by 8.9% between 2007 and 2012 even as the numbers of exotic/crossbred cows and female buffaloes have gone up by 28.8 and 8% respectively, according to the Agriculture Ministry’s latest Livestock Census. Disturbing though this may seem to some, the trend is a reflection of rational economic choices made by farmers.

ALL INDIA LIVESTOCK CENSUS (in thousands)			
CATEGORY	2007	2012	% Change
<b>Cattle</b>			
❖ Exotic/Crossbred			
• Male	6,844	5,971	-12.75
• Female	26,216	33,760	28.78
❖ Total Exotic/Crossbred	33,060	39,732	20.18
❖ Indigenous			
• Male	76,779	61,949	-19.32
• Female	89,236	89,224	-0.01
❖ Total Indigenous	1,66,015	1,51,172	-8.94
<b>Total Cattle#</b>	<b>1,99,075</b>	<b>1,90,904</b>	<b>-4.10</b>

- Traditionally, cattle and buffaloes were reared for the following purposes — draught power for agricultural operations, dung for manure and fuel, and milk. The advent of tractors, chemical fertilisers and LPG cylinders/kerosene has undermined the first two roles; as a result, farmers use bovines mainly as milch animals. This has resulted in a premium on female animals; not surprisingly, the decline in male animals between 2007 and 2012 is much sharper at 18.8% for cattle and 17.9% for buffaloes.
- Even within females, indigenous cattle lose out not only to their crossbred counterparts that yield more milk, but also to buffaloes that produce milk with higher fat content. So, farmers find it far more **attractive to maintain buffaloes and cows containing genetic material of ‘western’ breeds** such as Holstein Friesian and Jersey. The rising price of milk has only tilted the economics further in favour of these animals. Only a little over a fifth of the

country's milk now comes from indigenous or desi cows; at the current rate of decline, they are threatened with total marginalisation.

### **Way ahead:**

The Centre for Rural Development and Technology (CRDT) has identified five key topics of research: uniqueness of indigenous cows, Panchgavya in agriculture, medicine and health, food and nutrition and for utilities. The centre is considering various proposals with a pan-India presence to scientifically and technologically validate the existing beliefs about Panchgavya.

### **Conclusion:**

The only way to arrest marginalisation of desi cattle is to make them worthwhile to rear. Solutions such as strengthening laws against cattle slaughter aren't going to work; if anything, these will further disincentivise farmers as they are left with no viable mechanism for disposing animals that have either stopped giving milk or are male. A more realistic approach is to undertake systematic breeding and genetic upgradation of our finest indigenous cattle. Some of these breeds — **Sahiwal, Red Sindhi, Gir, Kankrej and Rathi** — are, in fact, good milk producers. An organised effort at conservation and propagation of elite germplasm from nucleus breeding herds will go a long way in making rearing desi cattle more economical for farmers.

## **07/03 - Bharat Stage-VI in 3 years: Race over speedbumps**

### **Summary:**

From April 1, all of India moves to Bharat Stage IV (BS-IV) vehicular emission norms, already in place in several parts of the country. The fuel sector has said it is committed to the move, but sections of the auto sector continue to lobby hard for a relaxation in the deadline, citing the need to liquidate unsold stock with older emissions technology.

### **What are BS norms?**

The BS — or Bharat Stage — emission standards are norms instituted by the government to regulate the output of air pollutants from internal combustion engine equipment, including motor vehicles. India has been following the European (Euro) emission norms, though with a time-lag of five years.

### **Emission norms in India:**

India introduced emission norms first in 1991, and tightened them in 1996, when most vehicle manufacturers had to incorporate technology upgrades like catalytic converters to cut exhaust emissions. Fuel specifications based on environmental considerations were notified first in April 1996 — to be implemented by 2000, and incorporated in BIS 2000 standards. Following the landmark Supreme Court order of April 1999, the Centre notified Bharat Stage-I (BIS 2000) and Bharat Stage-II norms, broadly equivalent to Euro I and Euro II respectively. BS-II was for the NCR and other metros; BS-I for the rest of India.

- From April 2005, in line with the Auto Fuel Policy of 2003, BS-III and BS-II fuel quality norms came into existence for 13 major cities, and for the rest of the country respectively. From April 2010, BS-IV and BS-III norms were put in place in 13 major cities and the rest of India respectively.

### **Need for emission norms:**

- Major pollutants such as fine particulate matter, sulphur dioxide, nitrogen oxides and carbon monoxide emitted by millions of vehicles on India's roads are severely affecting the health of people, particularly children whose lungs are immature and hence more vulnerable.
- Thousands of premature deaths and rising rates of asthma episodes highlight the urgent need to make a radical and complete shift to modern fuels and vehicle technologies.
- Higher sulphur results in high volumes of fine respirable particulates measuring 2.5 micrometres (PM2.5) being generated in emissions.

- Since even this obsolete standard was not followed uniformly, many vehicles, especially commercial passenger and freight carriers, have been using lower standard fuel supplied outside big cities. This has rendered their catalytic converters incapable of absorbing pollutants.

## The upgrade from BS-IV to BS-VI: what needs to be done

BS-V requires a specific fitment in the vehicle's engine. BS-VI needs one more, and each comes with issues that need fixing

### FOR BS-V: DIESEL PARTICULATE FILTER, OR DPF

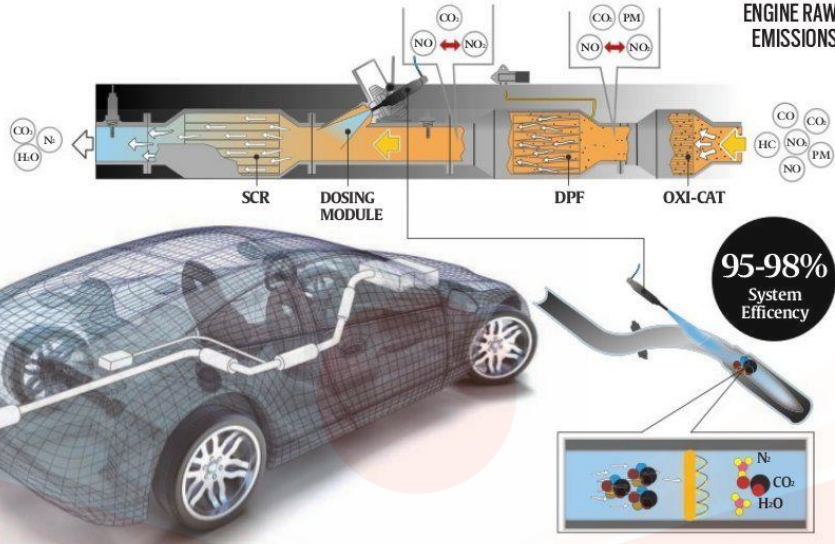
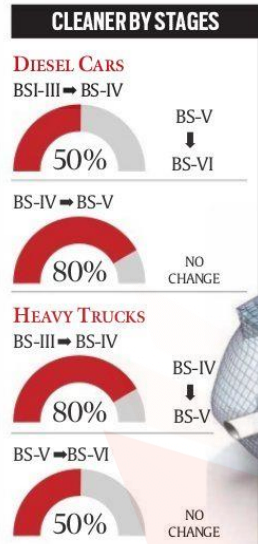
**WHAT IS IT?** DPF is a cylinder mounted vertically in the engine compartment. Its function is to remove particulate matter, or soot, from the diesel exhaust. It needs temperatures of 600 degrees Celsius, difficult in Indian conditions.

**WHAT'S THE PROBLEM?** Small cars, popular in India, have limited bonnet space, and will require a major redesign to accommodate DPF. But a bigger bonnet may result in the car breaching the sub-4-metre mark, and losing excise benefits.

### FOR BS-VI: SELECTIVE CATALYTIC REDUCTION TECHNOLOGY

**WHAT IS IT?** An SCR module reduces the oxides of nitrogen in the engine exhaust by injecting an aqueous solution called AUS 32 into the system. AUS 32 contains ammonia, for which a separate container will be needed on board the vehicle.

**WHAT'S THE PROBLEM?** An anti-defect mechanism is required to put the vehicle in the limp mode if AUS 32 is not refilled. Nationwide infrastructure will be needed for supply of AUS 32, which is safe, but does need careful storage and handling.



## ROADMAP FROM BS-IV TO BS-VI

### BS-IV

BY APRIL 1, 2015

■ All of North India (J&K except Leh & Kargil, Punjab, Haryana, HP, Uttarakhand, Delhi and bordering districts of Rajasthan and Western UP; All of Goa, Kerala, Karnataka, Telangana, Odisha; UTs of Daman & Diu, Dadra & Nagar Haveli, Andaman & Nicobar; parts of Maharashtra and Gujarat.

FUEL SUPPLY COMMENCED

BY APRIL 1, 2016

■ Corridor spanning highway link through Gujarat and Rajasthan linking North India to ports on west coast.

FUEL SUPPLY COMMENCED

BY APRIL 1, 2017

■ Rest of the Country

### BS-V SKIPPED

### BS-VI

BY APRIL 1, 2020

As per order issued by the Ministry of Road Transport and Highways on May 22, 2015, all oil marketing companies and other stakeholders are required to switch directly from BS-IV to BS-VI quality fuel.

SOURCE: Report of the Expert Committee on Auto Fuel Vision & Policy, 2015, Government of India, 2014

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epaper.editions indianexpress.com//c/17368702

## Why is it important to upgrade these norms?

Upgrading to stricter fuel standards helps tackle air pollution. Global automakers are betting big on India as vehicle penetration is still low here, when compared to developed countries. At the same time, cities such as Delhi are already being listed among those with the poorest air quality in the world. The national capital's recent odd-even car experiment and judicial activism against the registration of big diesel cars shows that governments can no longer afford to relax on this front.

- With other developing countries such as China having already upgraded to the equivalent of Euro V emission norms a while ago, India has been lagging behind.
- The experience of countries such as China and Malaysia shows that poor air quality can be bad for business. Therefore, these reforms can put India ahead in the race for investments too.

## Challenges before the government:

- There are questions about the ability of oil marketing companies to quickly upgrade fuel quality from BS-III and BS-IV standards to BS-VI, which is likely to cost upwards of Rs 40,000 crore.
- More challenging is the task of getting auto firms to make the leap. Automakers have said that going to BS-VI directly would leave them with not enough time to design changes in their vehicles, considering that two critical components — diesel particulate filter and selective catalytic reduction module — would have to be adapted to India's peculiar conditions, where running speeds are much lower than in Europe or the US.
- Also, the rollout model of introducing higher grade fuel and vehicles first in the cities has fundamental drawbacks, as was evident in the BS-IV implementation. In the periphery of designated BS-IV cities, BS-III vehicles could be registered; BS-IV vehicles (especially heavy vehicles) were more expensive, and BS-III fuel was cheaper than the BS-IV equivalent. And interstate trucks and buses, the biggest polluters, were forced to stay on with BS-III engines simply because the fuel outside cities did not conform to BS-IV norms.

## What will change after the new norms kick in?

- The BS-IV compliant fuels have sulphur concentration of 50 parts per million (ppm). This will come down to as low as 10 ppm in BS-VI compliant fuels and auto engines. This means a lower level of harmful emissions and reduced incidence of lung diseases.
- The switch to BS-VI norms will also reduce concentration of carbon monoxide, unburnt hydrocarbons, nitrous oxide and particulate matter from emissions.
- Finally, the quality upgrade will also result in diesel's cost of production going up by 63 paise per litre and petrol by Rs 1.40 per litre. The switch will also make petrol vehicles costly by Rs 50,000 and diesel vehicles by Rs 1 lakh.
- For consumers, this translates into higher retail prices of petrol and diesel.

## Way ahead:

A bigger bugbear for the auto sector is the fact that under the auto fuel policy, the intermediate BS-V level is to be skipped, and automakers and fuel suppliers are expected to leapfrog straight to BS-VI norms by April 1, 2020. The Ministry of Road Transport & Highways had issued a draft notification to this effect on February 19 last year. Recently, the government said it remains committed to meeting that deadline.

The implementation of the intermediate stage — BS-V standard — was originally scheduled for 2019. While this stage has been bypassed, the BS-VI standard, originally proposed to come in by 2024, has been advanced by 4 years — in line with promises India made at the Climate Change Conference in Paris in 2015, and the broad public sentiment against dangerously high levels of air pollution in major Indian cities.

## Conclusion:

The ultimate aim is that mass emissions to atmosphere must not exceed the values recommended by international standards. For export purposes however we have to comply with Euro or any other norms acceptable in the foreign market. We have to balance the market forces and the societal objective of keeping our air cleaner.

## 08/03 - All those who are out of the tax net

### Summary:

The Finance Minister, Arun Jaitley, made a sweeping statement in his Budget speech this year claiming that India is “a tax non-compliant society and too many people evade taxes”.

### What the stats say?

Of nearly 127 crore Indians, only 2.6 crore pay income tax. The fact that less than 3% of Indians pay income tax is automatically construed to imply that a large majority avoid paying income tax. It is also said that most Indians under-report their incomes.

### Background:

The perception that India is a land of tax avoiders and black money hoarders was first mooted by former Finance Minister P. Chidambaram who, in his 2013-14 Budget speech, emphatically asserted that “only 42,800 persons admitted to an income of more than Rs.1 crore per year”. The insinuation was that there is massive under-reporting of income.

- Prime Minister Narendra Modi also exclaimed in his New Year's eve speech that “only 24 lakh Indians reported an income greater than 10 lakh rupees.”



## Is it true that most Indians evade taxes?

- **India's per capita GDP is roughly ₹1 lakh**, i.e. the average Indian earns a lakh of rupees every year. Given India's large income inequality, it can also be inferred that when the average income is ₹1 lakh, a greater majority of Indians earn less than ₹1 lakh while a small number at the top earn large amounts. However, the income tax exemption threshold in India is ₹2.5 lakh, i.e. anyone earning below ₹2.5 lakh need not pay income tax. This implies that only those who earn more than 2.5 times the average income of ₹1 lakh will fall under the tax bracket.
- Thus, when a majority of Indians earn less than ₹1 lakh, an income tax exemption threshold of ₹2.5 lakh is sure to leave a vast majority out of the tax bracket. We also know from recent research by the National Sample Survey Office (NSSO) and Peoples Research on India's Consumer Economy (PRICE) that the average income of the richest 20% of Indians is ₹95,000. This means that even a large majority of the richest 20% of Indians do not qualify to pay income taxes.
- In this context, it is not entirely surprising that only 3% of Indians pay tax. This is not a function of a large number of Indians avoiding tax, as portrayed, but merely a reflection of the fact that India is a terribly poor country with an extremely high income tax exemption threshold.

## Global comparisons:

India has increased the income tax exemption threshold on seven occasions, from ₹40,000 to ₹2.5 lakh in the last two decades. India is the only large economy with an income tax exemption threshold that is 2.5 times the average national per capita income. In most countries, including in emerging economies such as China, Brazil and Argentina, anyone earning more than half the average national income falls under the income tax bracket.

## Should India reduce the income tax exemption limit?

If India lowers its income tax exemption to, say, ₹1 lakh from the current ₹2.5 lakh to be more in line with the rest of the world, nearly 1.5 crore more Indians will fall under the tax bracket. However, such a move will not fetch any meaningful extra tax revenues for the government but will merely bring more people into the tax bracket. It is thus misleading and specious to conclude that India's small number of taxpayers is entirely a result of some genetic and cultural trait of dishonesty of Indian society at large.

## Is it true that most Indians are underreporting their incomes?

Prime Minister's claim or Mr. Chidambaram's assertion is not peculiar. ₹10 lakh equals 10 times India's per capita GDP. Even in the much richer United States, only 12.5 lakh people out of nearly 20 crore adults reported an income greater than 10 times the per capita GDP of the U.S. In the United Kingdom, only 2 lakh people out of an adult population of 4 crore reported an income of greater than 10 times the average annual income. Similarly, an annual income of ₹1 crore in India is equal to 100 times the average annual income. Around 43,000 people in the U.S., 5,000 in the U.K. and a few hundred in Canada earn more than 100 times the average annual income. The number of people earning 100 times the average national income in most nations is extremely small. Against this backdrop, out of 68 crore adults in India, 24 lakh people earning more than ₹10 lakh per year or 42,800 earning more than ₹1 crore is not as abnormal as the Prime Minister or Mr. Chidambaram suggest.

## Conclusion:

However, the above argument does not imply that there is no tax evasion in India. It says that the number of Indians paying income tax or earning high incomes is not nearly as outlandishly small as claimed. Casting aspersions on all of Indian society solely on the basis of the small number of taxpayers is plain egregious. The proclamation that India is a tax non-compliant society can be true only if India is much richer than her GDP numbers reveal and is merely hiding behind a veil of feigned poverty.

## 09/03 - How to tame our forest fires?

### Summary:

Forest fires are big problems in countries like Australia and America. In India, states where forest cover is thick, like Himachal Pradesh, Uttarakhand, and the North-East, are often prone to forest fires. During the summer, forest fires become quite rampant because the forests become littered with dry senescent leaves and twigs, which could burst into flames ignited by the slightest spark.

### Types of forest fires:

Forest fires are normally of two types. A surface fire may burn primarily by spreading along the surface litter (senescent leaves and twigs and dry grasses etc.) on the forest floor.

- The other type is a crown fire, in which a crown of trees and shrubs burn, and is often sustained by a surface fire. A crown fire is particularly very dangerous in a coniferous forest because resinous material given off burning logs burn furiously. On hilly slopes, if the fire starts downhill, it spreads up fast as heated air adjacent to a slope tends to flow up the slope spreading flames along with it. If the fire starts uphill, the chances of spreading it downwards are less.



### Why Indian forests are prone to forest fires?

- A report titled Forest Fire Disaster Management, prepared by the National Institute of Disaster Management, a body under the Ministry of Home Affairs, in 2012, said about half of India's forests were prone to fires. 43% were prone to occasional fires and 5% to frequent fires, and 1% were at high or very high risk, the report said, quoting data from Forest Survey of India's State Forest Report, 1995, a compilation of 25 years of observations and analyses.
- Forest fires can be caused by both natural and man-made reasons. In most of the cases in India, due to heavy population, human habitations have often gone closer to thick forest, resulting in forest fires.
- The bulk of forest fires in India occurs in the tropical dry forests of our country, an umbrella category encompassing scrub, savanna grassland, dry and moist-deciduous forests. Almost 70% of forests in India are composed of these types.
- The roots of our current fire crisis lie squarely in the blanket implementation of a no-fire forest policy. This 'one-size-fits-all' approach of fire protection is perhaps incompatible with the ecology of India's tropical dry forests.
- Supply of fuel by ample invasive species present in the forests also aid the spread of forest fires. Authorities have failed in preventing the spread of such species.

### But, why are forest fires good?

- Wildfires are sometimes a natural process, and help forests by promoting flowering, branching and seedling establishment. Fires that are limited to the surface may help in the natural regeneration of forests. The heating of the soil may result in helpful microbial activity, and hasten decaying processes that are useful for the vegetation.
- Recent research on the ecology and bio-geographical origin of these forests indicates that fire occurrence and light availability are important factors that maintain the ecosystem.

- Field ecological research indicates that many tree species distinct to dry forests have co-evolved with fires and have developed fire-resistance features like thick, spongy bark, and can re-sprout from rootstock in response to fire.
- Also, frequent, low-intensity forest fires possibly prevent the proliferation of many invasive species which act as fuel for the spread of forest fires. Various studies and indigenous knowledge indicate that early dry season fires burn less hot, and are far less detrimental to vegetation than peak dry season fires which burn much hotter.

### **Who has the power to wield fire in India's tropical dry forests?**

The answer exposes the fault lines among contesting groups of stakeholders. Forest dwellers set fire to forests to clear walking paths, to collect non-timber forest products like gooseberry and mahua flowers, and to encourage the fresh growth of grass for their livestock, and sometimes as a part of ritual practice.

- Agriculturists set fire to hill forests so that the fertilising ash from fire washes down to their fields with the monsoon rains. For the forest dweller, therefore, fires have cultural and livelihood significance.
- The forest department, on the other hand, has historically prevented fire in order to protect timber stocks, and initiated a system of fire-lines around valuable timber 'compartments' or coupes. By burning the fire-lines before the onset of summer, forest fires, if they occurred, could be confined to a few compartments.
- More recently however, fire has been used as a management tool to increase the density of herbivores in tropical dry forests. The logic for this kind of burning is also related to the creation of fresh grass, but this time for consumption by wild herbivores rather than by cattle.
- In a centralised, top-down hierarchical system, these two broad ways of wielding fire are clearly incompatible. By enacting legislation that made the setting of forest fires an offence, the forest department gradually legitimised one world view of forests as timber and wildlife production systems and ignored other world views that envisioned forests as cultural and livelihood spaces.

### **Significance of forests:**

As per the latest state of forests report of the Forest Survey of India the actual forest cover of India is about 21% of the geographic area, corresponding to 63.3 million ha. Only 38 million ha of forests are well stocked (crown density above 40%). This resource has to meet the demand of a population of 950 million people and around 450 million cattle. As such, country has to meet the needs of 16% of the world's population from 1% of the world forest resources. The same forest has also to cater for the 19% of the world cattle population. The forests of the country are therefore, under tremendous pressure.

### **Way ahead:**

Fighting fires with minimal equipment in challenging terrain is a thankless task that poses grave risks. It is perhaps time to ask whether a strict no-fire policy is relevant in ecological and societal contexts, rather than raise ineffective questions about how forest fires can be controlled or prevented through technology.

### **Conclusion:**

Instead of viewing forest fires as being purely destructive in nature, forest managers should perhaps expand their world view and be more inclusive to information from ecological and local knowledge systems that view fires as being both rejuvenating and revitalising.

### Summary:

India has launched the second phase of the programme to eliminate the use of hydrochlorofluorocarbons (HCFC) as part of its commitment under the Montreal Protocol, which requires the complete removal of chemicals that result in ozone depletion and aid global warming. India has already successfully implemented HPMP stage-I.

The **Montreal Protocol** seeks to cut the production and consumption of ozone depleting substances in order to protect the earth's fragile ozone layer. It also aims at phase out HCFCs by 2030.

### What are HCFCs?

#### Hydrochlorofluorocarbons

**(HCFCs)** are a large group of compounds, whose structure is very close to that of Chlorofluorocarbons (CFCs), but including one or more hydrogen atoms. Under normal conditions, HCFCs are gases or liquids which **evaporate easily**. They are generally **fairly stable and unreactive**. **HCFCs do not usually dissolve in water**, but do dissolve in organic (carbon-containing)

solvents. HCFCs are chemically similar to Hydrobromofluorocarbons (HBFCs), Chlorofluorocarbons (CFCs) and Halons and therefore display some similar properties, though they are much less stable and persistent. HCFCs are also part of a group of chemicals known as the volatile organic compounds (VOCs).

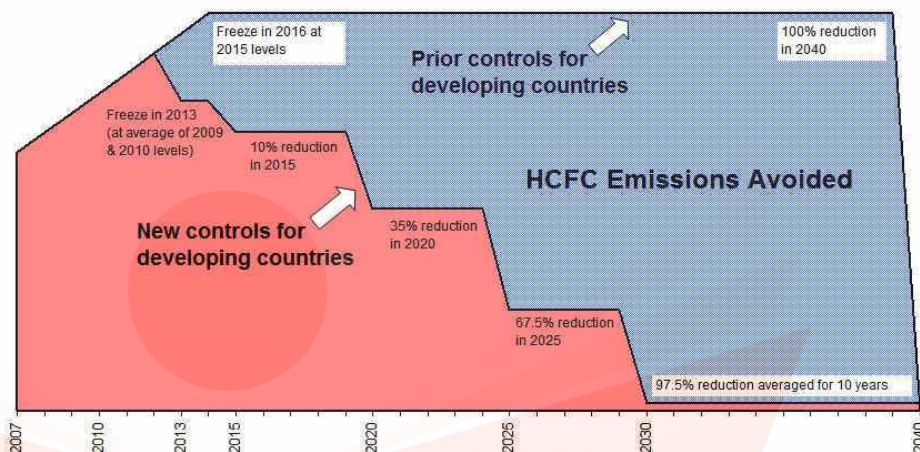
#### How might it affect the environment?

HCFCs are unlikely to have any impact on the environment in the immediate vicinity of their release. As VOCs, they may be slightly involved in reactions to produce ozone, which can cause damage to plants and materials on a local scale. At a global level however, releases of HCFCs have serious environmental consequences. Although not as stable and therefore not so persistent in the atmosphere as CFCs, HBFCs or Halons, they can still end up in the higher atmosphere (stratosphere) where they can destroy the ozone layer, thus reducing the protection it offers the earth from the sun's harmful UV rays. HCFCs also contribute to Global Warming (through "the Greenhouse Effect"). Although the amounts emitted are relatively small, they have a powerful warming effect (a very high "Global Warming Potential").

#### Indian HCFC phase- out plan 2:

- Under HPMP-II, India has secured \$44.1 million for the implementation of the Montreal Protocol for phasing out 8,190 metric tonnes or 769.49 ODP (Ozone Depleting Potential) tonne of HCFC consumption between 2017 to 2023, in order to meet the compliance targets under Montreal Protocol for 2020.
- The phase out of HCFCs in the HPMP stage-II will be addressed through several technology conversions at a number of large, medium, small and micro enterprises in the polyurethane foam sector, a few large enterprises in the air conditioning manufacturing sector and activities in the refrigeration and air conditioning servicing sector. India is committed to ensuring the smooth transition of these enterprises to new technologies and values the interest of SMEs most.
- In the process, targeted technical assistance and awareness programmes will be implemented focused on SMEs during the HPMP stage-II to ensure timely and sustainable phase out of HCFCs.

### New Stronger Montreal Protocol Controls Reduce Developing Country HCFC Emissions about 58 Percent



- Under HPMP-II, more than 400 enterprises, including over 300 micro, small and medium enterprises (MSMEs) in the foam manufacturing sector and six large air-conditioning manufacturing enterprises will be supported for conversion from HCFCs to non-HCFC technologies.
- The plan also provides for promotion of energy efficiency, development building codes integrating HCFC phase out issues, cold chain development with non-HCFC alternatives and development of standards for new non-ODS.
- It also specifically focuses on the MSME sector in foam manufacturing. Adequate attention has also been given to synergize the refrigeration and servicing (RAC) sector trainings under HPMP II, with the Skill India Mission, in order to multiply the impact of skilling and training. According to estimates, nearly, 16,000 service technicians will be trained under HPMP-II.

### **What else needs to be done?**

- The data for refrigerant consumption during 2015 compiled by the European Union show that in the developing world, split air-conditioning units, car ACs and commercial refrigeration record the highest use of these chemicals. It is imperative the Central government ensures that its efforts to upgrade industries using the \$44.1 million in funding available under the Protocol are scaled up to meet the need fully.
- Modernising the technology used by 400 industrial units, many of them small and medium enterprises, by 2023 has to be complemented by policy changes that encourage adoption by consumers.
- Systemic change requires the active participation of State governments, which can enact and enforce new building codes and purchase regulations that are envisaged in the current phase.
- Newer refrigerants with lower global warming potential are available to industry, and there are some early adopters, while research on chemicals with greater energy reduction and very low contribution to global warming has to continue.
- Credentialed training of service technicians in the newer technologies is welcome as it will bring about change of refrigerants used in the repair and replacement market and create additional employment.
- It is important to make consumers aware of green options among products in terms of the underlying technologies, and incentivise adoption through tax structures.
- The Environment Ministry's proposal to prescribe energy-efficient temperature limits for air-conditioning units in public facilities is promising. A lot of energy is wasted because of poor infrastructure and lack of understanding of efficiency metrics.
- The Centre should also conduct audit of public buildings to determine whether they are suitably designed, as climate control relies as much on passive influences such as insulation, green roofing and the nature of materials used in construction.

### **Way ahead:**

CFCs and HCFCs have contributed to the quality of modern life, particularly as valuable components in refrigeration and computer technology. However, their impact on the atmosphere has prompted several countries to agree to stop producing them.

- At present, HCFCs are used in various sectors like refrigeration and air conditioning (RAC) and foam manufacturing. These sectors are directly related to urban development, agriculture through cold chain, and industrial development.
- Research results suggest that there is a need to develop acceptable alternatives to HCFCs. Two possible alternatives to HCFCs are already being used successfully. Refrigerators that use propane gas, ammonia, or water as coolants are being tested in research laboratories, and use up to 10% less energy than typical models using CFCs as a coolant.

- Telephone companies are experimenting with crushed orange peels and other materials to clean computer circuit boards, as substitutes for another important use of CFCs and HCFCs. Certain microorganisms are also being tested that degrade HCFCs and HFCs, which could help in controlling emissions of these compounds during manufacturing processes involving their use.

### Conclusion:

The continued success of the Montreal Protocol in its goal to eliminate HCFCs by 2030 will depend on reducing the acquisition costs of cleaner technologies. The greater affordability of solar photovoltaic power and its rapid adoption at various scales is a clear pointer. More people will have access to air-conditioning and refrigeration in coming years, and the focus of government policy must be to make them energy-efficient and eco-friendly.

## 13/03 - The curious case of Justice Karnan and its implications for higher judiciary

### Summary:

Recently, **for the first time ever, a sitting high court judge was hauled up before the Supreme Court to answer for a contempt charge.** A seven-judge bench of the top court issued contempt notice to Justice CS Karnan of the Calcutta high court.

- **In another first, Judge Justice Karnan has passed an order directing the Central Bureau of Investigation to investigate and file a report against all the seven Judges and Attorney General Mukul Rohatgi.**
- He has further directed the Secretary General of Lok Sabha to place the entire facts of the case before the Speaker of the Lok Sabha, so that inquiry under the Judges Inquiry Act can be initiated, and proceedings of impeachment against the SC judges can be carried out. He has also “requested” the President to stay the warrant, and has maintained the claim that he was being singularly targeted by the higher judiciary for being a Dalit.

### What’s the issue?

The warrant was issued against the Judge for his failure to appear before the Bench hearing suo-motu contempt proceedings against him, for openly accusing Judges of corruption. The Court had taken into account the letters circulated by the Judge earlier this year, making allegations against Supreme Court and High Court judges.

### Significance of this issue:

**A seven-judge bench for a contempt hearing is unprecedented** — it is usually handled by two- or three-judge benches, and very rarely by a five-judge bench — and showed how seriously the Supreme Court was taking this case. It suggests that the court has reached the end of its tether while handling Justice Karnan, a judge who has had frequent run-ins with fellow judges in the Madras high court (where he was originally elevated) and the Calcutta high court, apart from the Supreme Court itself.

### A pattern of Judicial indiscipline:

To say that Karnan’s acts over the last few years have been judicial indiscipline is to understate it. Using its contempt jurisdiction, and by removing him from administrative and judicial work in early February, the Supreme Court has tried to ensure that he cannot cause further damage.

There has been a pattern to most of these incidents — he makes an allegation against fellow judges, no proof is offered and he doesn’t push it further, until the next incident and provocation. His judicial work has also stirred controversy — recently, he had a verbal altercation in open court with his fellow judge in the Calcutta high court where they differed in controversial circumstances over granting bail to the accused in a case.

This highlights a constitutional problem that the framers of the Constitution did not, for some reason, foresee: **How do you discipline a judge short of impeachment?**

Impeachment by Parliament is a long-drawn-out and difficult process. As it should be in a constitution where judicial independence is rigorously protected. Whatever “misbehaviour” a judge is alleged to have committed should be serious enough for Parliament to sit up and take notice before removing her or him from office. It is also the only sanction that can be imposed on an erring judge.

This leaves us with two problems: **What to do when Parliament is disinclined to act on serious misbehaviour, and how to address less serious breaches of judicial discipline.**

### **What actions can be taken against erring judges?**

At present, there are certain informal measures that can be taken against an erring judge: ***change their workload to different cases, relieve them of all judicial work, or transfer to another high court. The first two can be done by the chief justice in charge of the high court, while the last requires the cooperation of the government.***

### **Is it the appointment process which is to be blamed?**

In India, appointment of judges has a tumultuous history. Till 1971, the Chief Justice of India’s recommendation was treated as gospel by the government. In the 1980s, the Centre tried to exercise more control over the appointment process by seeking more power to recommend judges to the High Courts and the Supreme Court.

A significant change occurred in 1993 with the Supreme Court’s judgment in **SCAORA v Union of India**, which brought the appointment of judges (especially senior most top court judges) under the judiciary. Today, the appointment process follows the recommendation by the five senior most Supreme Court judges (including the Chief Justice of India), which is binding on the Centre that issues the formal order of appointment. Known as the ‘collegium method of appointment’, the process is utterly opaque and arbitrary, causing deep dissatisfaction all around.

The Parliament’s crude attempt at ‘reforming’ this unsatisfactory system by replacing it with the National Judicial Appointments Commission was struck down by the Supreme Court in 2015 as being a violation of the Constitution’s basic structure.

### **Appointment of Justice Karnan:**

Karnan was appointed as an additional judge of the Madras high court in 2009, upon the recommendation of the collegium of judges headed by then-Chief Justice of India, KG Balakrishnan. As with other judicial appointments, there is no official record as usual of the basis on which he was considered fit for appointment, what criteria were examined and whether any material against his elevation was considered and rejected.

While the **Constitution does not prescribe any criteria beyond 10 years of legal practice and citizenship for a lawyer to be appointed as a High Court judge**, in practice it’s usually at least 15 years and someone with a reasonably well-established practice in the High Courts.

### **What’s the main concern now?**

The controversy surrounding Karnan is part of a larger problem in the judiciary rather than a one-off problem. Late in 2016, the Supreme Court initiated contempt proceedings against former SC judge Markandey Katju for his ill-thought-out comments against judges. Multiple judges of High Courts and the Supreme Court have faced accusations of sexual harassment. In 2011, two High Court judges, PD Dinakaran and Soumitra Sen, faced impeachment proceedings for corruption and abuse of office, but resigned before removal. Nirmal Yadav of the Punjab and Haryana High Court also faced charges framed by a CBI court for allegedly receiving a bribe as a sitting judge in 2008.



**Credibility is a problem** that is plaguing the judiciary, and judges make up a veritable chunk of it. Never mind that it's quick enough in punishing disobedience through contempt, the judiciary will always find it hard to command the respect of citizens if it's not run honourably and by the right men and women. The blame for the poor choice of judges in the 1970s and 80s could perhaps be attributed to the government, but currently the judiciary lacks such excuses.

Even admitting that sometimes a poor appointment might have been made, **there has been no effort to create a transparent mechanism to discipline judges who overstep the lines of propriety.** The in-house procedure to examine and act on complaints against judges is seldom used and, in any case, works with little transparency. Like with appointments, the whole process is shrouded in secrecy with corridor gossip substituting for facts and informed debates. Those with legitimate grievances against a judge have little recourse from the judiciary itself, or for that matter, any other institution.

### **How the present collegium system can be improved?**

- Accepting applications for appointments as High Court judges should be followed. This is followed in the U.K. and can be adopted in India too.
- There must be full and complete disclosure of relationships and affiliations of applicants to sitting and retired judges.
- Minimum eligibility criteria for consideration need to be laid down, including appearances in important cases.
- Parliament should also enact changes to provide a uniform retirement age for judges of the Supreme Court and the High Courts, so that the present practice of some of the judges seeking to be in the good books of the existing or prospective members of collegiums in the Supreme Court is avoided. This will also obviate the argument of expectation based on seniority for appointment as judges of the Supreme Court.
- The retirement age may be raised uniformly to 70 with a condition that no judge retiring at 70 shall be appointed as a member of any Tribunal.
- The continuation as a judge after the age of 65 should be subject to being found 'not unfit' by the Permanent Commissions.
- A minimum tenure of two years should be provided to the Chief Justice of India and the Chief Justice of High Courts.
- No judge who is more than 68 years should be made a Chief Justice.
- Court management should not be vested with Judicial Officers but assigned to trained managers.
- All the three organs of the state should also introspect as to why there has been no or inadequate representation in the higher judiciary from amongst women.

### **Conclusion:**

The contempt case is still sub judice but it's not clear what the Supreme Court's endgame in these proceedings is. Its powers under the contempt jurisdiction are vast but do not extend to removing a High Court judge, something that can only be done through impeachment by the President. Whatever they choose to do in the context of Karnan, the SC judges must be aware that there is a larger problem that they cannot wish away — that of a judiciary whose credibility is slowly ebbing away.

## 14/03 - Allowing for a sibling

### Summary:

China, in October 2015, ended its one child policy. This January, China's National Health and Family Planning Commission (NHFPC) announced that there were 17.86 million births in 2016, a 7.9% increase from 2015. About 45% of babies were born to families that already had one child. The NHFPC also anticipates a baby boom, estimating the number of births annually to be between 17 and 20 million by 2020.

### Why One Child Policy was adopted by China?

One child policy was adopted by China in 1979 out of the Malthusian fears that unchecked population growth would lead to economic and environmental catastrophe. It was also a response to concerns about food shortages.

**Thomas Robert Malthus** was the first economist to propose a systematic theory of population. He articulated his views regarding population in his famous book, *Essay on the Principle of Population* (1798), for which he collected empirical data to support his thesis. He argued that **if left unchecked, a population will outgrow its resources, leading to a host of problems.**

### Changes in the policy over the years:

Under a 2013 relaxation, a couple was permitted to have two children if either parent was an only child. That was an improvement on the 2000 exemption, which allowed couples to have a second child only if both parents had no siblings. There were other concessions too, in rural areas, such as the option to have a second child if the first-born was either a girl or a disabled infant. National minorities were also exempted from the population control policy.

### Was the Policy Effective?

In essence, it did bring down the population by 400 million, according to Chinese officials.

- But, it failed to spark a baby boom. When the announcement was made, 11 million couples were eligible to have a second child. As such, officials were expecting around two million births in 2014.
- That figure never came into fruition as only 700,000 couples applied for the new dispensation and only 620,000 were given a permit. In other words, China is facing a huge demographic issue in the next years to come. They have a rapidly aging population where a quarter will be over 60 by 2030.

### Negative consequences of this policy:

- The birth of a second child in an urban setting, birth of a second child in a rural setting where the first child was a boy, and birth of a third child to an ethnic minority family would be considered illegal. In many instances, the birth of a girl child would not be reported in favour of a male child. In these cases, the "illegal" child could not be registered with the household registration system (hukou) and, hence, would receive no access to welfare, especially education and health services.
- Substantial fines, loss of job, and incentives for compliance were mechanisms by which this policy was enforced. Many lives were disrupted with the state enforcing the norms strictly, and the social consequences were illegal and forced sex-selective abortions and female infanticide, resulting in a skewed sex ratio.

### Why China changed its policy?

China has a population of over 1.4 billion, 30% of which is over the age of 50. There is also huge gender imbalance. Now, China needs more people for joining workforce. The working population in China is coming down and elderly population is going up. So Communist Party of China changed one-child policy to a two-child policy as the country is looking further ahead that China to have larger families.

## Way ahead:

The government is contemplating incentives to parents so that they would not be deterred by the economic burdens that would result from having a second baby. Providing maternity and paternity leave and provisions for parents to attend to sick children are among the proposals.

However, the prospects of the current approach would necessarily vary, depending on the extent to which people in different regions took advantage of the easing of the earlier norm. A challenge for the Chinese government would be to raise investment in the provision of child-care services, when it is already faced with a large ageing population and shrinking numbers in the working-age population.

## 15/03 - The economics of maternity leave

### Summary:

The government, through an amendment to the **Maternity Benefit Act**, has enhanced the paid maternity leave for women in the organised sector to **26 weeks** from the current 12. This move is in line with several expert recommendations including that of the World Health Organisation, which recommends exclusive **breastfeeding of children for the first 24 weeks**.

### Significance of this move:

This move places India in the league of wealthy Western countries that have some of the most generous benefits for new mothers. In fact, once the amendment to the Maternity Benefit Act, 1961, comes into effect, only Canada and Norway will be ahead of India, with 50 and 44 weeks of paid leave, respectively.

### Other provisions in the Maternity Benefit (Amendment) Bill, 2016:

- Maternity leave for children beyond the first two will continue to be 12 weeks.
- Maternity leave of 12 weeks to be available to mothers adopting a child below the age of three months as well as to the “commissioning mothers”. The commissioning mother has been defined as biological mother who uses her egg to create an embryo planted in any other woman.
- Every establishment with more than 50 employees to provide for crèche facilities for working mothers and such mothers will be permitted to make four visits during working hours to look after and feed the child in the crèche.
- The employer may permit a woman to work from home if it is possible to do so.
- Every establishment will be required to make these benefits available to the women from the time of her appointment.



### Background:

In 2012, which is the most recent data available, only 27% of Indian women worked compared to 55% in OECD countries and 63% in East Asia. This deficit shaves off an estimated 2.5% from the country's gross domestic product every year. Worse still, India is one of the few countries where women's participation in the workforce has actually fallen—the International Labour Organization reported last year that female participation declined from 34.1% in 1999-00 to 27.2% in 2011-12. There is also a stark rural-urban divide: In 1972-73, women comprised 31.8% of all rural workers; in 2011-12, that figure had dropped to 24.8%. For urban workers, the number has increased only marginally, from 13.4% to 14.7% in that same time period.

## **Benefits of maternity leave:**

- Data from around the globe shows that access to maternity leave reduces the risk of infant mortality, and improves breastfeeding rates and duration which has a positive bearing on the child's physical and mental health.
- Studies also show that adequate maternity leave (of at least 12 weeks) helps prevent postpartum depression and stress in new mothers.
- On the economic front, there is ample evidence to suggest maternity leave does not hurt businesses and is actually good for the economy—women workers who have access to maternity leave are more likely to return to the workforce, allowing their firms to not just retain but also attract the best talent. Moreover, the cost incurred by employers in the process (reimbursements for temporary replacements or overtime expenses) is considered to be negligible.
- A survey by the Associated Chambers of Commerce and Industry of India last year found that 25% of urban Indian women quit their jobs after having their first child. Extended maternity leave might help change this pattern.

## **Why this move would have very little difference?**

Positive though it is, the amended law is expected to cover only 1.8 million women, a small subset of women in the workforce. For many poor millions in the unorganised sector, the only support available is a small conditional cash benefit of ₹6,000 during pregnancy and lactation offered under the **Maternity Benefit Programme**. Besides, it is reported the government is planning to restrict even this meagre benefit to the first child for budgetary reasons.

## **Challenges ahead:**

Internationally, there have been instances wherein pro-women, family-oriented policies have backfired.

- For example, after Chile made it mandatory for companies of a certain size to provide free childcare (India is doing something similar by making it compulsory for companies with either 30 women employees or more than 50 employees to provide access to a crèche) it was found that companies responded by reducing women's salaries by nine to 20%.
- Similarly, when Spain introduced a new law in 1999 allowing all workers with children under 7 to work reduced hours without being fired, it was only women who took the benefit—and soon companies were found to be hiring and promoting fewer women while women of childbearing age were 45% more likely to be fired.

## **What else needs to be done?**

- Providing benefits for women and children is a societal responsibility which can be funded in a large country through a combination of general taxation and contributory payments from those who have the means.
- Health care should be treated as a right and deliveries handled without cost to women; the income guarantees during the 26-week period can be ensured through a universal social insurance system. Such a policy would harmonise the varying maternity benefit provisions found in different laws that govern labour at present. There would also be no discrimination against women in recruitment by employers who currently have to factor in benefit payments. Conversely, women would not suffer loss of income simply because they cannot remain in employment after childbirth.
- Beneficiaries covered by the latest amendment must be protected from discrimination through clear provisions. Mandating creche facilities to help women workers under the changed law is a forward-looking move, but it will work well only with a good oversight mechanism.

## **Conclusion:**

Women's empowerment can be achieved through universal initiatives, not by imposing conditionalities to avail benefits. Access to welfare support has become even more critical as workers migrate frequently due to economic

changes. The twin imperatives are, therefore, to create more jobs for women in a diversified economy, and to provide social opportunity through maternal and child welfare measures.

It also becomes clear that India's problem is not just about ensuring women return to the workforce after childbirth but in bringing women into the workforce in the first place. Resolving this will require more than just maternity leave—let us keep that in mind as we celebrate our newly acquired progressive credentials.

## 16/03 - How Nagas Perceive the Creation of Seven Additional Districts in Manipur

### Summary:

Blockade of the national highways leading to the Manipur valley by the United Naga Council (UNC) has severely affected life in the State. The economic blockade has caused misery and untold sufferings to the common people and has fuelled ethnic tensions in Manipur. Nagas feel that their peaceful protests and appeals to the state as well as the Centre have been ignored. Thus, the economic blockade was seen as the only means through which they are able to raise the pitch.

### Reason behind this:

The Manipur state government created seven new districts by bifurcating seven (of a total of nine) districts. This decision had as much to do with long-pending demands — in particular, for a new Kuki-majority district to be carved out of the larger Senapati hill district — as with easing administrative access to far-flung areas from the district headquarters.

However, this move was not welcomed by the UNC.

### Background:

There were four Memoranda of Understanding signed between the Naga civil society and the Manipur Government. According to these, all stake holders would be consulted and the land rights of Naga people would be ensured. Given this, the Nagas perceive the creation of the seven new districts without consulting the stakeholders as a demonstration of utter disregard for the four memoranda as well as for the assurances given to them about consultations on matters affecting them.

### Why the UNC is opposing this move?

- While residents and groups in the new districts have welcomed the decision, the UNC has protested, alleging that areas with a Naga population have been divided and that the lack of consultation is a violation of commitments made by both the Centre and the State in various memoranda of understanding.
- While better administrative management of the seven new districts should be feasible, the Manipuri Nagas of the existing hill districts of Tamenglong, Ukhrul, Senapati and Chandel feel that some of the new smaller districts would be under greater political control of the Manipur state administration at Imphal.
- There is also a foreboding among the Nagas that non-Naga tribes like Kukis would eventually dominate in districts like Kangpokpi — where presently there is a coexistence of Kukis, Nagas and the Meiteis. The UNC also claims



that the creation of new districts in the Naga dominated hill areas will encroach upon and divide the traditional land holdings of Naga tribes.

- Besides, the government has not consulted the Hill Area Committees before taking the decision. The Hill Area Committees are formed to protect the rights of hill people, and under Article 371(C) of Constitution, must be consulted on matters relating to tribal people.

### **Article 371C and the Hill Areas Committee:**

In the North Eastern State Reorganization Act, 1971, Parliament provided a constitutional safeguard for the interests of the Hill Areas. Accordingly, the **Hill Areas Committee** was constituted under **article 371C**. As per this article, the **President** may, by **order** made with respect to the State of Manipur, provide for the constitution and functions of a committee of the Legislative Assembly of the State consisting of **members of that Assembly** elected from the Hill Areas of that State.

- The Hill Area Committee is empowered by the Constitution to monitor law making for and administration of hill areas. Since the Hill Area Committees were formed to protect the rights of the hill people under Article 371C of the Constitution, the **powers of the state legislature are limited by the Hill Areas Committee**.
- The contention of the Nagas is that any law affecting the hill areas must be vetted by the committee, a rule that the state government overlooked when passing the three bills last year and again while creating the seven new districts. This is viewed by Nagas in particular as a violation of their tribal rights.
- Also, they feel that the state government has neither consulted the Hill Area Committee nor the Autonomous District Councils, thus disrespecting not only the constitutional provisions but also the local self-governance institutions. The Nagas also contend that these Committees/Councils are denied funds and not consulted by the state government on vital issues pertaining to the Hill people.

### **What's the main concern now?**

The state of turmoil in Manipur appears to have become a recurrent phenomenon. About a year ago, serious disturbances affecting public order arose after the Manipur Assembly hurriedly passed three controversial bills on August 31, 2015. These related to compulsory registration of non-Manipuris, non-alienation of their land rights, and registration of employees of shops and establishments in the Imphal Valley. These were passed without prior consideration and vetting by the members belonging to the hill constituencies and hill councils. These bills, deemed to be negatively affecting the interests of tribals and violative of the afore-mentioned constitutional provisions, had triggered a huge reaction in the hill districts and Churachanpur. These three bills did not finally get Presidential assent, and perforce had to be reverted back by the Union Home Ministry (MHA) to the state government for reconsideration. As in the case of the creation of seven new districts, the state government's unilateral and non-consensual action triggered the earlier crisis as well.

### **What needs to be done now?**

The Union government has a residuary responsibility to assist in turning around the present situation. While a direct assumption of executive responsibility by the Union government may not be warranted, a more proactive role of the Governor at New Delhi's behest, may be justifiably required. The Constitution has adequate scope for this purpose under its Seventh schedule and Article 371 C, without impinging on the autonomy of the state.

MHA may simultaneously use the instrumentality of the state governor for suitable overview and to ensure that the consultative process necessary with the hill councils is mandatorily followed within the existing constitutional framework.

### **Way ahead:**

The institutional divergence and diversity in property rights is a unique phenomenon in Manipur and land has been the root cause of many conflicts in the state. Here the socio-economic and political systems are centred on the issue of land. Land, particularly for the tribals, has remained the single most important physical possession. Land also plays

an important role in shaping cultural and ethnic identity. Furthermore, the tribal communities have a symbiotic relationship with land and forests on which their livelihood depends. Given all this, the Nagas see the creation of the seven new districts as a threat of encroachment on their tribal land rights.

Hence, there is a need to understand the perspective of the Nagas and the reasons for their agitation. That is essential for the governments at the Centre and the State to suitably address the issues involved and work towards bringing peace and harmony in Manipur.

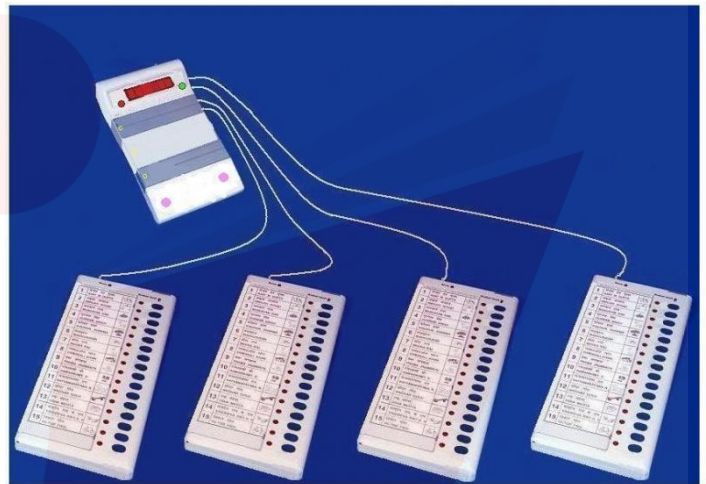
### **Conclusion:**

While many tribal groups spearheaded by the Naga fraternity have expressed reservations about the creation of the seven new districts, the majority Meiteis and even the Kuki minority have welcomed the move. The onus now remains with the new Government of Manipur to embrace the perspective of the Nagas and address their core concerns. The views of the Nagas on the formulation of the new districts must be considered and addressed to foster peace and harmony in the state.

## **17/03 - Credibility of Electronic Voting Machines**

After declaration of result of the recently held General Elections to the State Legislative Assemblies of Goa, Manipur, Punjab, Uttar Pradesh and Uttarakhand, some political parties have raised voice against the credibility of the ECI-EVMs, alleging tampering of EVMs during the said elections. However, the Election Commission has rejected these allegations.

Such concerns, about alleged tamperability of ECI-EVM have been raised earlier also since their introduction including before HC/SC. These allegations have been dismissed. ECI unequivocally reiterate that given effective technical and administrative safeguards, EVMs are not temperable and integrity of electoral process is preserved.



### **Background of EVM:**

With a view to overcome certain problems associated with use of ballot papers and taking advantage of development of technology so that voters cast their votes correctly without any resultant ambiguity and removing the possibilities of invalid votes totally, the Commission in December, 1977 mooted the idea of EVM.

- The law was amended by the Parliament in December, 1988 and a new section 61A was inserted in the Representation of the People Act, 1951 empowering the Commission to use voting machines. The amended provision came into force in March, 1989.
- Central Government appointed the Electoral Reforms Committee in January, 1990 consisting of representative of several recognized National and State Parties. The Electoral Reforms Committee further constituted a technical Expert Committee for the evaluation of the electronic voting machines. The Committee came to conclusion that the electronic voting machine is a secure system. The expert committee, therefore, unanimously recommended in April, 1990 the use of the electronic voting machines without further loss of time.
- Since 2000, EVMs have been used in 107 General Elections to State Legislative Assemblies and 3 General Elections to Lok Sabha held in 2004, 2009 & 2014.

### **Various observations made by the courts in this regard:**

The issue of possible tampering of EVM has been raised before various High Courts since 2001. Various High Courts after going into all aspects of the technological soundness and the administrative measures involved in the use of EVMs at elections in India, have held that the EVMs in India are credible, reliable and totally tamperproof. In some of these cases, even Supreme Court has dismissed appeals filed by some petitioners against High Court orders.

- The High Court of Karnataka held that “This invention is undoubtedly a great achievement in the electronic and computer technology and a national pride”. Both the Karnataka High Court and the Madras High Court observed that use of EVMs in election has several advantages over the system of ballot paper/ballot box election.
- The Madras High Court also categorically ruled out any question of tampering of the EVMs. It said, “There is also no question of introducing any virus or bugs for the reason that the EVMs cannot be compared to personal computers. The programming in computers, as suggested, has no bearing with the EVMs. The computer would have inherent limitations having connections through Internet and by their very design, they may allow the alteration of the programme but the EVMs are independent units and the programme in EVM is entirely a different system.”
- It is admitted before various courts that the data or technique brought in use in EVM in India were not subject to piracy as nobody knows anything about the contents of any type or has any unauthorized or free access to EVM.

### **Why tampering of EVMs is impossible or very difficult?**

- The machine is electronically protected to prevent any tampering/manipulation. The programme (software) used in these machines is burnt into a One Time Programmable (OTP)/Masked chip so that it cannot be altered or tampered with. Further these machines are not networked either by wire or by wireless to any other machine or system. Therefore, there is no possibility of its data corruption.
- The software of EVMs is developed in-house by a selected group of Engineers in BEL (Defense Ministry PSU) and ECIL (Atomic Energy Ministry’s PSU) independently from each other. A select software development group of 2-3 engineers designs the source code and this work is not sub-contracted.
- After completion of software design, testing and evaluation of the software is carried out by an independent testing group as per the software requirements specifications (SRS). This ensures that the software has really been written as per the requirements laid down for its intended use only.
- After successful completion of such evaluation, machine code of the source programme code is given to the micro controller manufacturer for writing in the micro controllers. From this machine code, the source code cannot be read. Source code is never handed over to anyone outside the software group of PSUs.
- Micro controller manufacturer initially provides engineering samples to PSUs for evaluation. These samples are assembled into the EVM, evaluated and verified for functionality at great length. Bulk production clearance by PSU is given to micro controller manufacturer only after successful completion of this verification.
- The source code for the EVM is stored under controlled conditions at all times. Checks and balances are in place to ensure that it is accessible to authorized personnel only.
- During production in the factory, functional testing is done by production group as per the laid down Quality plan and performance test procedures.
- The software is so designed that it allows a voter to cast the vote only once. The vote can be recorded by an elector from the ballot unit only after the Presiding Officer enables the ballot on the Control Unit. The machine does not receive any signal from outside at any time. The next vote can be recorded only after the Presiding Officer enables the ballot on the Control Unit. In between, the machine becomes dead to any signal from outside (except from the Control Unit).

- Samples of EVMs from production batches are regularly checked for functionality by Quality Assurance Group, which is an independent unit within the PSUs.
- Certain additional features were introduced in 2006 in ECI-EVMs such as dynamic coding between Ballot Unit (BU) and Control Unit (CU), installation of real time clock, installation of full display system and date and time stamping of every key-pressing in EVM.
- Technical Evaluation Committee in 2006 has concluded that any tempering of CU by coded signals by wireless or outside or Bluetooth or WiFi is ruled out as CU does not have high frequency receiver and data decoder. CU accepts only specially encrypted and dynamically coded data from BU. Data from any outside source cannot be accepted by CU.

### **Uniqueness of ECI-EVMs:**

Some political parties have stated that some foreign countries have stopped using EVMs. The Commission has come across comparisons between ECI-EVM and EVMs used by foreign countries. Such comparisons are both misplaced and misguided. ECI EVMs are Stand alone Machine. Therefore ECI-EVMs cannot be compared with machines of other countries.

- Most of the systems used in other countries are Computer based with internet connectivity. Hence, these could be vulnerable to hacking.
- As stated above, the software in the ECI-EVM chip is one time programmable (OTP) and burnt into the chip at the time of manufacture. Nothing can be written on the chip after manufacture. Thus the ECI-EVMs are fundamentally different from the voting machines and processes adopted in various foreign countries.
- Any surmise based on foreign studies or operating system based EVMs used elsewhere would be completely erroneous. The ECI-EVMs cannot be compared with those EVMs.

### **What else has been put in place to prevent misuse of EVMs?**

- The Commission has put in place an elaborate administrative system of security measures and procedural checks-and-balances aimed at prevention of any possible misuse or procedural lapses. These safeguards are implemented by ECI transparently with the active and documented involvement of political parties, candidates and their representatives at every stage to build their confidence on efficacy and reliability of EVMs. These safeguards are:
- Before every election, a first level checking (FLC) is done for every EVM to be used in the election by the engineers of the manufacturers in the presence of political parties' representatives. Any malfunctioning EVM is kept separately and is not used in the election.
- Manufacturers certify at the time of FLC that all components in the EVM are original. After this, the plastic cabinet of Control Unit of the EVM is sealed using a "Pink Paper Seal", which is signed by representatives of political parties and stored in strong rooms. After this stage, the plastic cabinet of control unit of the EVMs cannot be opened. There is no access to any component of inside of EVMs.
- Additionally, at the time of FLC, at least 1000 votes are cast by the representatives of political parties on 5%of EVMs randomly selected by them. A printout of the results of this mock poll as well as a sequential print out of every vote polled during the mock poll at the time of First Level Checking of EVMs are taken out for at least 5% of EVMs and shown to the representatives of political parties. Representatives of political parties are allowed to pick machines randomly for this purpose. In rest of the machines, numbers of votes polled during the mock poll are to the satisfaction of the representatives of political parties. Representatives of political parties are allowed to do mock poll themselves. It is all documented by DEOs/ROs.
- Subsequently, stored EVMs are randomized by computer software twice once for allocation of machines to assembly constituencies and second to polling stations in the presence of candidates or their representatives

before they are distributed for use in individual polling stations. Such lists of EVM containing serial number of EVM allocated to particular polling station are provided to the political parties/candidates.

- Candidates and their representatives are allowed to conduct mock polls on EVMs at the time of candidate setting and also before the actual poll on the poll day to satisfy themselves about the satisfactory functioning of EVMs being used.
- Once the candidate setting is done, the Ballot Unit of the EVM is also sealed with thread/Pink Paper seals so that nobody has access to the inside of the Ballot Unit too. These Pink seals also bear signatures of representatives of political parties/candidate.
- On the poll day, a mock poll by casting at least 50 votes is conducted at every polling station in the presence of the representatives of the candidates/polling agents with their signature and a mock-poll certificate to that effect is obtained from every Presiding Officer.
- After the mock poll is over, another thread seal and green paper seals are put on the EVM to block access to all buttons on the EVM, except those, which are used for the conduct of poll. These paper seals and thread seals are allowed to be signed by the polling agents. After the poll is over, the Presiding officer presses the “Close” button on the EVM in the presence of polling agents. Thereafter, no votes can be polled in the EVM.
- After this, the entire EVM is sealed. Candidates and their agents are allowed to put their signatures on the seals, which they can check for the intactness of the seal before counting. Candidates/representatives travel behind vehicles carrying EVMs from polling stations to counting storage rooms.

#### **Conclusion:**

As explained above, the Commission has put in place an elaborate technical and administrative system of safeguards to ensure error-free functioning of EVMs in elections. The Commission says it is thus fully satisfied with the tamper proof functioning of the ECI-EVMs. The Commission has also offered opportunities more than once to those alleging the tamperability of EVM, no one has been able to demonstrate to the Commission that the EVM with ECI and used in the country’s election process, can be manipulated or tampered with. The Commission does not find any merit in such allegations and reject all such allegations and suspicions raised by some political parties. Therefore, ECI has assured all citizens that EVM of ECI are temper proof and fully satisfied with the integrity of electoral process using EVM.

## **18/03 - Are injectable contraceptives advisable?**

#### **Summary:**

The government has recently chosen to introduce the injectable contraceptive, depot medroxyprogesterone acetate (DMPA). However, women’s groups and various health groups have been cautioning the government for decades against introducing injectable contraceptives in the public health system.

#### **What are injectable contraceptives?**

Contraceptive injections are available as a type of hormonal contraceptive for women. Commonly known as Depo, Depo-Ralovera and Depo-Provera, contraceptive injections are considered as a long-acting option for hormonal control. The injections have artificial progesterone called Depot Medroxyprogesterone Acetate (DMPA). A single contraceptive injection is effective for 12 to 14 weeks.

#### **Mechanism of Action:**

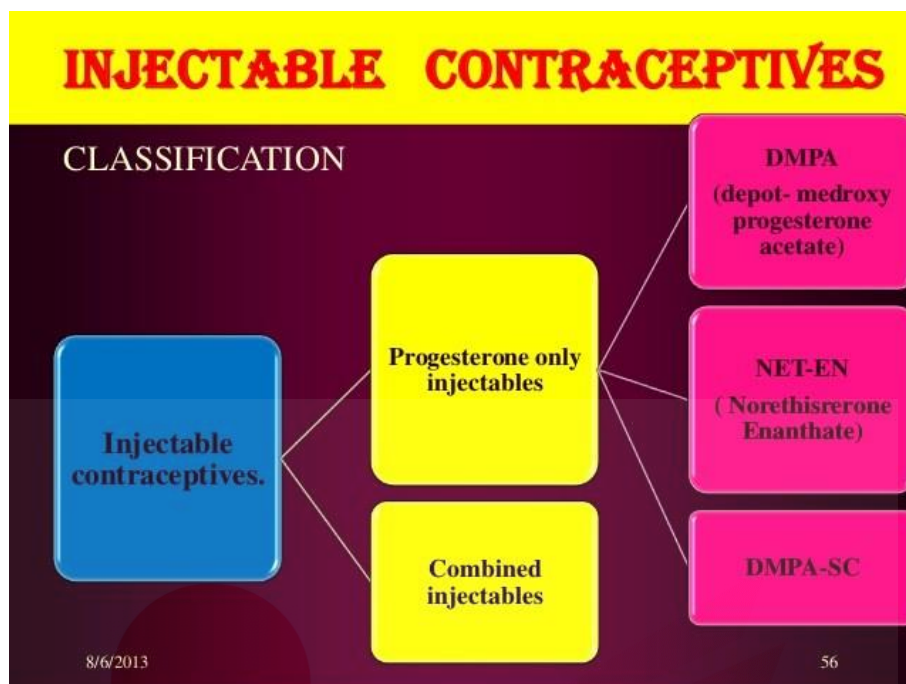
Contraceptive or progesterone injections are administered either in the gluteus muscle, thigh muscle or the arm. They are normally given during the menstrual cycle in the first five days. The injections can only be administered by a health professional. The injection itself stops the ovaries from the process of ovulation. It also helps increase the thickness of cervical wall so that male discharge cannot enter the uterus during intercourse.

Once a contraceptive injection has been administered into the body, it releases the hormone into the bloodstream over an interval of 12 to 14 weeks. This protects the woman against pregnancy for a period of three months.

### Background:

Over eight years to 2016, as India's population surged, the use of contraceptives declined almost 35%, as abortions and consumption of emergency pills—both with health hazards and side effects—doubled, according to health ministry data.

Despite a 14% percentage-point rise in national literacy over a decade to 2011, hazardous birth-control measures of the last resort, emergency birth-control medication and abortions, are becoming the first choice among both poorer and wealthier, better-educated Indians. The result is that India's population, now estimated at 1.32 billion, is expected to surpass China's within the next six years and reach 1.7 billion by 2050, according to World Health Organization projections, even as millions of women die from unsafe abortions.



### Case against injectables:

- There are concerns regarding the preparedness of the government health system to implement this contraceptive method. DMPA may be easy to administer, but health workers need to be capable of assessment before administering it and of managing side effects that some women may experience. Also, DMPA requires administration once every three months.
- Besides, the Government of India guidelines on the injectable contraceptive mention side effects like menstrual changes, irregular bleeding, prolonged/heavy bleeding, amenorrhea (stopping of menstruation), weight gain, headaches, changes in mood or sex drive, and decrease in bone mineral density.
- Moreover, studies from Africa have shown that the risk of HIV infection may increase for women who have been administered injectable contraceptives.
- Another practical objection to injectable contraceptives is that it is “provider-controlled” — medical professionals must give the injection and the contraceptive effects are irreversible for the period of efficacy. As against oral birth control pills, which are “user-controlled” and can be stopped soon as a woman develops complications.

### What are the main concerns?

While the injections are popular around the world, a 2010 report by USAID-India noted that India's contraceptive choices were highly skewed towards single method use. Over 75% resort to female sterilisation, followed by condoms (10%), birth control pills (6%), and intrauterine devices (4%). Herein lies the fundamental problem with the introduction of hormonal injectable contraceptives. In India, women don't make a choice when it comes to family planning. They make a sacrifice. Women are not making informed choices or giving consent with full understanding of what the drug does to their bodies. The first choice offered to these women is sterilisation. This is extremely regressive situation.

The total Contraceptive Prevalence Rate (CPR) in India among married women is 54.8% with 48.2% using modern methods. This is comparatively lower than neighbouring countries like Bhutan, Bangladesh and Sri Lanka, whose CPR stands at 65.6% cent, 61.2% and 68.4% respectively. The method mix (basket of choices) picture in India shows that

the primary method of family planning is female sterilization – at 65.7% cent with over 90% being female sterilizations, which is the highest in the world. One of the key reasons for this is the limited availability of a wide range of contraceptive methods in the public sector, though injectables are available in the private sector.

### **What needs to be done?**

The government should fill the gaps in the present system first. Regular stock-outs of oral contraceptives and condoms, lack of training to the auxiliary nurse midwife or ANMs on intrauterine contraceptive devices (IUCDs), instances of lack of informed consent for post-partum IUCD, and the rampant violation of the guidelines for sterilisation all reflect gaps in implementing and monitoring such programmes. The government should ensure that the existing contraceptive methods are provided properly.

### **Way ahead:**

The articulation of population as a ‘problem’ or talking in terms of a ‘population explosion’ is deeply problematic, for it brings with it the spectre of ‘control’ and eventually, in a country like ours, control over women’s body and fertility. Countries that have achieved lower fertility rates have done so due to economic and social development and improvements in public services, including health services. Simply put, if a family is convinced that their one child or two children will not only survive but be healthy, they won’t have more children.

The government needs to introspect whether existing methods have been made available to people through informed choice, in a safe manner. By introducing DMPA in the public health programme, the government also has to answer whose interests are actually being served. There are serious concerns that some agencies are pushing this for profit. Experience from the private sector, where these contraceptives had been made available previously, shows that very few women had opted for injectable contraceptives.

### **Conclusion:**

The government should have been more cautious in introducing this method. It appears that by introducing injectable contraceptives under the guise of ‘expanding the basket of choices’, the government actually aims to control women’s fertility rather than uphold their reproductive rights. Instead of relying on DMPA, which is known to have adverse effects on women’s health, the government should put efforts into improving the delivery of existing contraceptive methods.

## **20/03 - Low, stagnating female labour-force participation in India**

### **Summary:**

National Sample Survey (NSS) data for India show that labour force participation rates of women aged 25-54 (including primary and subsidiary status) have stagnated at about 26-28% in urban areas, and fallen substantially from 57% to 44% in rural areas, between 1987 and 2011. Different age groups or different surveys essentially tell the same story, even though the levels differ slightly. This is despite India enjoying economic and demographic conditions that would ordinarily lead to rising female labour-force participation rates.

### **What’s the main concern?**

This is an important issue for India’s economic development as India is now in the phase of “demographic dividend”, where the share of working-age people is particularly high, which can propel per capita growth rates through labour force participation, savings, and investment effects. But if women largely stay out of the labour force, this effect will be much weaker and India could run up labour shortages in key sectors of the economy. Also, there is a wealth of evidence suggesting that employed women have greater bargaining power with positive repercussions on their own well-being and that of their families.

## Is India behaving according to the feminization U hypothesis?

It is being said that the reason for low female labour-force participation in India is mainly because India is behaving according to the feminization U hypothesis, wherein female labour force participation first declines and then rises.

The hypothesized mechanisms for the decline are a rising incompatibility of work and family duties as the workplace moves away from home, an income effect of the husband's earnings, and a stigma against females working outside the home (generally, or in particular sectors). The rising portion then comes with a receding stigma, high potential earnings of females as their education improves further, as well as fertility decline, and better options to combine work and family duties.

### Contrasting view:

According to some experts, India is not behaving according to this hypothesis. They cite the following reasons:

- According to a study, the empirical support for the feminization U hypothesis is feeble at best. There is little support for a U-shape of female participation in the Indian case.
- Also, the U hypothesis cannot explain the vastly different levels of female participation between countries. In India, female labour force participation rates are 22 percentage points below their expected level in a feminization U curve.

### What is the real reason behind this trend?

A number of new micro-level studies using NSS data have appeared in the last few years, trying to shed light on this phenomenon, examining labour supply and labour demand factors. Some of them are as follows.

#### Study 1:

A study, after first showing that the decline in female participation in rural areas is concentrated among married women aged 25-64, then showed that from 1987-2011, rising own education, incomes, and husband's education could account for most of the decline in female labour force participation in rural areas. It also argues that the decline might be driven by increasing returns to home production, relative to market production. This might be particularly relevant if the domestic production is childcare. While the educated women that drop out indeed report being engaged in home production, the direction of causality is less clear. Maybe women drop out of the labour force for other reasons and then report a focus on domestic activities. Also, it would be good to test whether this decline of participation occurs particularly among women with children of school-going age.

#### Study 2:

Analysing data from 1987-2012, the study finds a strong income effect, a negative (but over time declining) effect of husband's education, a U-shaped own-education effect, a negative effect of children, marriage, and the presence of in-laws, and positive effects of access to finance and infrastructure, and access to Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) employment. Labour demand variables, (imperfectly) proxied by local employment structure, do not display a large impact.

## MISSING WOMEN



Source: World Development Indicators

### **Study 3:**

Using data from 1987-2011, this study finds that rising household incomes and husband's education, falling labour market attachment of highly educated women, as well as adverse development in district-level labour demand, contributed to declines in female participation, while fertility decline and rising own education worked in the opposite direction, to generate a net stagnation. More generally, they argue that rising education and incomes are allowing women to get out of menial and undesirable employment, while jobs deemed appropriate for more educated women (especially in healthcare, education and public service) have not grown commensurately with the rise in female education, leading to falling participation among more educated groups.

### **Study 4:**

This study shifts the focus towards labour demand and argues that the lack of availability of agricultural and non-agricultural jobs in rural areas appears to be driving the declining participation in rural areas.

### **Study 5:**

This study focusses on the effect of structural change on female labour force participation using state-level data. They find that structural change in India, which led to a rapidly shrinking agricultural sector in favour of a rapidly expanding service and construction sector, mainly contributed to the declining female labour force participation. The lack of a shift towards manufacturing and a persistently low female share in manufacturing ensured that the labour force as a whole did not become more female.

### **What can we conclude?**

In summary, it appears clear that labour supply factors do play a role in depressing female incomes. It is difficult for married women with some education and children to be employed, especially if they have an educated and well-earning spouse. But labour demand also matters. Particularly in rural areas, it appears that declining agricultural employment has left a gap in employment opportunities for women as non-agricultural jobs have not emerged at the required pace.

### **Way ahead:**

Many questions remain open. The role of rising female education needs further investigation, as it is not associated with a commensurate rise in labour market attachment. Education appears to play other roles. It is suggested that education also plays a role in the marriage market, and it affects productivity of home production. The role of policies needs to be investigated more clearly. More micro evidence on the effectiveness of employment policies is crucially necessary. Experimental Evidence provide interesting evidence, but more is required here. The role of macro, trade and structural policies also needs to be investigated.

### **Conclusion:**

Unlocking the potential of women definitely requires an increase and shift in the composition of overall employment opportunities as well as questioning of societal strictures. As the country commends itself on world-leading economic growth and aspires towards a \$20 trillion economy, it becomes necessary to take women along to make this goal a reality. Societal change will be the largest needle mover, but a constant push through the government, organizations and individuals is critical to bend societal norms for the better.

## **21/03 - The need for a business cycle dating committee**

### **Summary:**

The idea of a business cycle dating committee (BCDC) is not popular among Indian policy makers. It has not received sufficient attention. Most of the research in business cycles is done keeping in mind advanced industrial economies. The scarcity of research for studies of business cycles in India along with data limitations might be some of the reasons why policymakers in India are not too concerned about this issue.

## **What are business cycles?**

Business cycles are the short-run fluctuations in aggregate economic activity around its long-run growth path. It is the “ups and downs” in economic activity, defined in terms of periods of expansion or recession.

The US' National Bureau of Economic Research (NBER) defines *a recession as a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real gross domestic product (GDP), real income, employment, industrial production, and wholesale-retail sales.*

## **What does a BCDC do?**

A BCDC maintains a chronology comprising alternating dates of peaks and troughs in economic activity. It analyses and compares the behaviour of key macroeconomic variables such as consumption, investment, unemployment, money supply, inflation, stock prices, etc., which may have different dynamics before, during and after the recession.

## **Need for a BCDC:**

It identifies turning points which act as a reference point for the construction of coincident, leading and lagging indicators of the economy. Timely identification of economic contraction and its severity allows policymakers to intervene, and thereby reduce its amplitude and duration. In addition, firms can re-evaluate projections of sales and profits, and the consumers their purchasing and investment plans, based on information on transitions to new business cycle phases.

## **International experiences of business cycle dating committees:**

- The NBER's BCDC maintains a chronology of the US business cycle. NBER is a private, non-profit, non-partisan organization conducting economic research and regarded as authoritative by both academic researchers and the public at large. The committee was created in 1978. The committee waits long enough so that the existence of a peak or trough is not in doubt and does not follow a fixed time rule.
- For the euro area, it is the Centre for Economic Policy Research (CEPR) which does this job. Like the NBER, CEPR is also an independent, non-profit organization. CEPR dates the business cycle for the euro area as a whole and not for any individual country. Although the countries in the euro area have adopted a common monetary policy since 1999, countries have heterogeneous institutions and policies. Hence, some of the criteria of dating business cycles for CEPR differ from those for the NBER, although similar definitions of a recession are adopted by both these organizations.
- Even an emerging market economy such as Brazil has a BCDC known as O Comitê de Datação de Ciclos Econômicos (Codace), created by the Brazilian Institute of Economics. It was founded in 2005 and replicates the experience of the NBER BCDC and CEPR.

## **Why does India need a BCDC?**

- By maintaining a chronology of business cycles, India will be able to better monitor the economy.
- A BCDC can also maintain an index of coincident, leading and lagging indicators for the Indian economy. Currently, India relies mostly on individual studies for the dating of business cycles.

## **Proposal by technical advisory group in this regard:**

The Reserve Bank of India (RBI) set up a working group of economic indicators in 2002 and a technical advisory group (TAG) on the development of leading indicators for the Indian economy in 2006, both under the chairmanship of R.B. Barman.

- The working group proposed a standing committee for business cycle analysis. Its job was the same as a BCDC, i.e., maintaining historical dating of business cycles.

- TAG suggested a methodological framework for the construction of coincident, leading and lagging indicators along with a composite index for the Indian economy. It also reviewed different techniques adopted by various international organizations.

### Who should be in charge of a BCDC?

Whether a BCDC should be part of the government, the RBI or an independent research organization with high credibility is debatable. Notably, the members of all the aforementioned BCDCs are independent scholars. As a result, the decision regarding the dating of business cycles is not political. This is important in a country like India where GDP numbers are contentious and political parties try to score points on these numbers. Also, the BCDCs are created by independent non-profit organizations. This responsibility does not lie with the government or with the central bank.

### Conclusion:

Creating a BCDC will go a long way in maintaining transparency, strengthening the information base for the Indian economy and helping gauge better the changing nature of the Indian economy. This will also help India to be more in synchronization with the other developed and emerging market economies.

## 22/03 - What goes around must come around

### Summary:

Wastewater management across the globe receives too little social or political attention. It is often ignored or sidelined. In this regard, the 2017 **United Nations' Water Development Programme's World Water Development Report (WWDR) – Wastewater: The Untapped Resource** makes clear that we can no longer afford this disconnect.



### What's worrying?

Untreated wastewater poses a threat to both human health and our aquatic ecosystems, and is a challenge that is particularly acute in Asia-Pacific. The report notes that more than 80% of the world's wastewater — over 95% in some least developed countries — is released into the environment untreated. In Thailand, 77% of wastewater was untreated in 2012; it was 81% in Vietnam the same year and 82% in Pakistan in 2011.

- Besides, Asia-Pacific region is in the midst of a profound urban shift that is straining its already limited infrastructure and capacity to effectively treat wastewater. As of 2009, an estimated 30% of urban dwellers in the region lived in slums, low-income areas, where wastewater is often discharged into the nearest surface drain or informal drainage channel.
- The lack of attention and resources devoted to effective wastewater management ignores one of the most potentially effective means of addressing the global water crisis.

### Factors determining access to wastewater management services:

Socioeconomic factors typically determine access to efficient wastewater management services that can more effectively deal with such pollution loads. Wealthier neighbourhoods are usually better served than slum areas, which

are more likely to face the risk of contracting cholera, dysentery, typhoid and polio due to consuming faeces-contaminated water. However, even in countries with improved sanitation coverage, only 26% of urban and 34% of rural sanitation and wastewater services prevent human contact with excreta along the entire sanitation chain.

### **Wastewater as untapped resource:**

Along with the human cost, there are enormous economic stakes involved in the effective management of wastewater. The WWDR estimates that for every \$1 spent on sanitation, society benefits by an estimated \$5.5, and notes that “neglecting the opportunities arising from improved wastewater management is nothing less than unthinkable in the context of a circular economy”.

- A circular economy is one in which economic development and environmental sustainability are interdependent, with a strong emphasis on minimising pollution, while maximising reuse and recycling. From this perspective, wastewater is an untapped resource of unparalleled potential.
- When safely treated, wastewater can be a source of water, energy, nutrients and other recoverable materials that is both affordable and sustainable. The extraction of wastewater by-products such as salt, nitrogen and phosphorous has proven lucrative in Asia-Pacific. In Southeast Asia, revenues from fertilizer have paid for the operational costs of the systems to extract them several times over.

### **The Singapore example:**

Singapore is using reclaimed water, branded “NEWater”, to serve up to 30% of its needs. While largely used for industrial purposes, the water is potable and demonstrates what can be accomplished through innovative policy approaches. The largely industrial use of NEWater also points to wastewater’s potential benefits for food production and industrial development.

### **What needs to be done?**

More effective and efficient management of wastewater requires greater support of municipalities and local governments, which often lack the human and financial resources they need to enforce environmental rules and improve infrastructure and services. In terms of the former, businesses dumping toxins into local water systems often find it more cost-effective to pay fines rather than to modify their processes.

### **Conclusion:**

As we pursue the **2030 Agenda for Sustainable Development**, the 663 million people around the world who still lack improved sources of drinking water put into perspective the urgency of our mission. Sustainable Development Goal (SDG) 6 specifically focusses on water and sanitation, with Target 3 addressing water quality, but the availability of water is a cross-cutting issue upon which every aspect of development hinges. Put simply, water is life, and without a sustained commitment to improving and benefiting from effective wastewater management, that precious resource, and the billions of lives it nourishes, are in peril.

## **23/03 - Breathing life into health care in India**

### **Summary:**

The National Health Policy, 2017, was recently approved by the Union Cabinet. After considering suggestions from the public, state governments and others, the new policy will replace the previous one, which was framed 15 years ago in 2002. The policy, which aims at providing healthcare in an “assured manner” to all, will address current and emerging challenges arising from the ever changing socio-economic, technological and epidemiological scenarios.

### **Key highlights:**

- The government aims in shifting focus from “sick-care” to “wellness”, by promoting prevention and well-being.
- It intends on gradually increasing public health expenditure to 2.5% of the GDP.

- It aims to strengthen health systems by ensuring everyone has access to quality services and technology despite financial barriers. The policy proposes increasing access, improving quality and reducing costs. It proposes free drugs, free diagnostics and free emergency and essential healthcare services in public hospitals.
- It also focusses on primary health care: The policy advocates allocating two-thirds (or more) of resources to primary care. It proposes two beds per 1,000 of the population to enable access within the golden hour (the first 60 minutes after a traumatic injury).
- It aims to reduce morbidity and preventable mortality of non-communicable diseases (NCDs) by advocating pre-screening.
- It highlights AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy) as a tool for effective prevention and therapy that is safe and cost-effective. It proposes introducing Yoga in more schools and offices to promote good health.
- The policy also lists quantitative targets regarding life expectancy, mortality and reduction of disease prevalence in line with the objectives of the policy.

### **Key targets:**

- Increase Life Expectancy at birth from 67.5 to 70 by 2025.
- Reduce infant mortality rate to 28 by 2019.
- Reduce Under Five Mortality to 23 by 2025.
- Achieve the global 2020 HIV target (also termed 90:90:90; 90 per cent of all people living with HIV know their HIV status, 90 per cent of all people diagnosed with HIV infection receive sustained antiretroviral therapy and 90 per cent of all people receiving antiretroviral therapy will have viral suppression).
- To reduce premature mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases by 25% by 2025.

### **What's good about the policy?**

The World Health Organization (WHO) was established in 1948 with the promise of realising 'Health for all'. Almost seven decades later, both WHO and India are still striving towards achieving the vision of universal health coverage. Universal health coverage is fundamental to achieving the health objective under the Sustainable Development Goals (SDGs). Yet, about 400-million people – one out of every 17 of the world's citizens – lack access to essential health services. With a population of 1.2 billion, India has a remarkable opportunity to take on a leadership role in addressing this major gap and providing assured health services to all its citizens.

- Considering this, the Indian government's newly-approved National Health Policy is a laudable step in this direction. The policy seeks to promote universal access to good quality healthcare services while ensuring that no one faces financial hardship, and to ensure that public hospitals provide universal access to a wide array of free drugs and diagnostics. This policy can help realise the vision of achieving universal health coverage and 'health for all' in India.
- If carefully implemented, the policy's proposed steps such as a health card for every family, which will enable access to primary care facilities and a defined package of services nationwide, will certainly help improve health outcomes in India. The recommended grading of clinical establishments and active promotion and adoption of standard treatment guidelines can also help improve the quality of healthcare delivery in India.



# National Health Policy 2017



## Digital interventions for the nation's health

Promoting tele-consultation linking tertiary care institutions with specialist consultation

National Knowledge Network for Tele-education, Tele-CME, Tele-consultations and digital library

National Digital Health Authority to regulate, develop and deploy digital health

Introductions of Electronic Health Record (EHR)

## Preventive and promotive focus with pluralistic choice

Creations of Public Health Management cadre in all states to optimise health outcomes.

Interventions from early detection of issues in childhood to prevention of chronic illnesses.

Tracking behaviour change, education and counselling at all levels.

Plethora of options to choose from among yoga and AYUSH umbrella of remedies

## Fostering patients-focus, quality and an assurance based approach

Compliance to right of patients to access information on condition and treatment.

National Healthcare standards organization maintaining adequate standards in public and private sector.

Separate empowered medical tribunal for speedy resolution on disputes and complaints.

Grading of establishments and active promotion of standard treatment guidelines

## Universal, easily, affordable primary healthcare

Comprehensive primary health care package with geriatric, palliative and rehabilitative care.

Health Card for access to primary healthcare facility services anytime, anywhere

Free drugs and diagnostics along with low cost pharmacy chains (Jan Aushadhi Stores )

Free health care to victims of gender violence in public and private sector.

## Better regulatory mechanisms and quality control

Strengthening post market surveillance program for drugs, product and devices

Regulating use of devices to ensure safety and quality compliance

Timely revision of National List of Essential Medicines along with appropriate price control

Standard Regulatory framework for laboratories and imaging centers, specialized emerging services.

### Challenges ahead:

- The policy faces the challenging task of ensuring affordable, quality medical care to every citizen. With a fifth of the world's disease burden, a growing incidence of non-communicable diseases such as diabetes, and poor financial arrangements to pay for care, India brings up the rear among the BRICS countries in health sector performance.
- Among the most glaring lacunae in the present context is the lack of capacity to use higher levels of public funding for health. Rectifying this in partnership with the States is crucial if the Central government is to make the best use of the targeted government spending of 2.5% of GDP by 2025, up from 1.15% now.
- Although a major capacity expansion to produce MBBS graduates took place between 2009 and 2015, and more initiatives were announced later, this is unlikely to meet policy goals since only 11.3% of registered allopathic doctors were working in the public sector as of 2014, and even among these, the number in rural areas was abysmally low. More health professionals need to be deployed for primary care in rural areas.

## What needs to be done now?

- More health professionals need to be deployed for primary care in rural areas. Availability of trained doctors and nurses would help meet the new infant mortality and maternal mortality goals, and build on the gains from higher institutional deliveries, which exceeded 80% in recent years.
- Contracting of health services from the private sector may be inevitable in the short term, given that about 70% of all outpatient care and 60% of inpatient treatments are provided by it. But this requires accountability, both on the quality and cost of care.
- No more time should be lost in forming regulatory and accreditation agencies for healthcare providers at the national and State levels as suggested by the expert group on universal health coverage of the Planning Commission more than five years ago. Without such oversight, unethical commercial entities would have easy backdoor access to public funds in the form of state-backed insurance.
- It should also be mandatory for all health institutions to be accredited, and to publish the approved cost of treatments, in order to remove the prevailing asymmetry of information.
- For the new policy to start on a firm footing, the Centre has to get robust health data. Currently this is fragmented because inputs from multiple sources and sample surveys are not reconciled, and the private sector is often not in the picture.
- To reduce high out-of-pocket spending, early deadlines should be set for public institutions to offer essential medicines and diagnostic tests free to everyone. This was estimated in 2011 to require a spending increase of only 0.4% of GDP, which is within the 2.5% that the Centre is talking about.

## Conclusion:

The policy presents a clear vision of how India's sluggish health system can be galvanised to deliver health and well-being to all by 2030, to meet the Sustainable Development Goal on health. The real challenge lies in its operational amplification and effective implementation which call for cementing consensus, catalysing commitment and channelling close coordination for steering Centre and the States together to deliver on this vision.

## 24/03 - Do we need a presidential system?

### Summary:

It is argued by some section of the society that the political system in India was created based entirely on British parliamentary democracy and their experience of what they themselves were deprived of. So, according to these people, the Westminster model of democracy is not suited to our reality.

Traditionally, there have been three criticisms of the presidential form of government: the president can assume dictatorial powers; the executive is not responsible to the directly elected legislature; and finally, if the president belongs to one party and the legislature is controlled by another party, it can lead to conflict and paralysis. Each of these criticisms can be dealt with. As the US experience has shown, there are definite checks and balances in the presidential system.

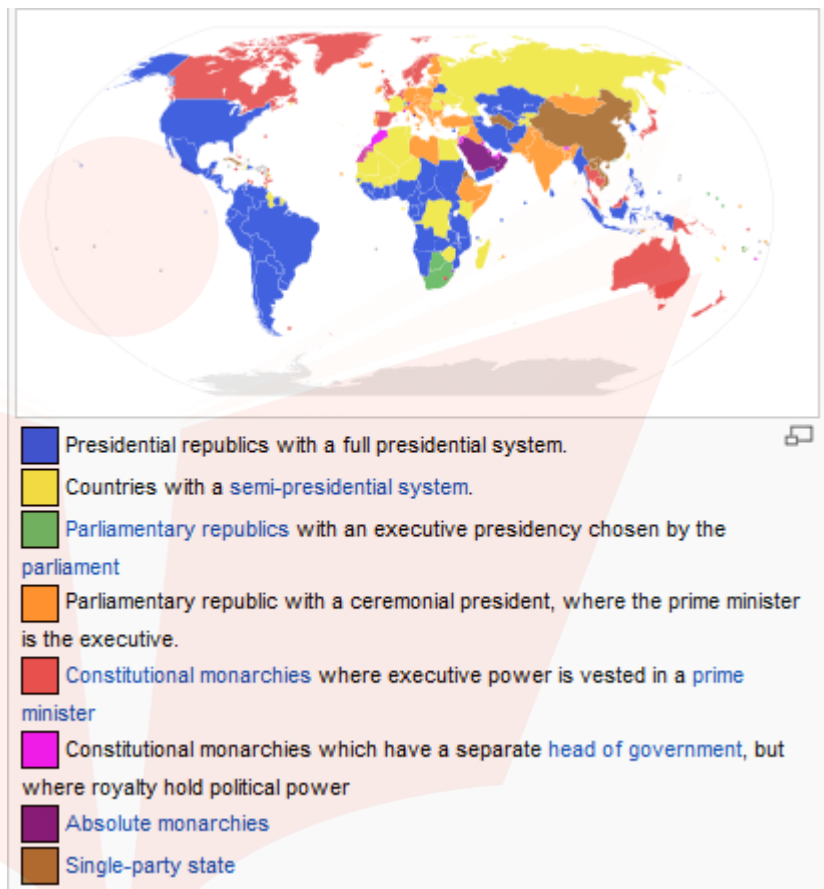
### Benefits of Presidential system:

- First, it will force political parties to be more democratic and robust. All political parties will have to choose their best candidates as there will be a direct head-to-head contest. The people will not accept anyone less. There will be no alternate power centres, no remote controls, and no backseat drivers. Those not in the magic circle will get an opportunity.
- Second, the voters will know their candidates intimately. The electorate has enough data to take calls on their candidates.

- Third, the president will be fully in charge of the executive. He will be able to attract the best and brightest to his cabinet, irrespective of their political affiliations. They will serve at his pleasure and be accountable to him. He won't have to fix quotas for allies or give important positions to senior but incompetent leaders. Nor will he have to waste time thinking about their loyalty.
- Fourth, the government will be stable. The president will be elected by the people and will be voted out by them. He will not have to appease unreasonable allies and indulge in compromises all the time. He can raise FDI sectoral caps, increase the price of diesel, and hike train fares without thinking that his job is in danger or that he will be forced to rollback these measures.
- Fifth, the legislature will be free to do its work. The job of parliament is to pass laws. But opposition law-makers have begun to believe their duty is to bring down the government. Once that power is taken away from them, it will bring them back to their primary task of discussing bills and passing laws that will improve the lot of the people.

### Arguments against Presidential system:

- A presidential system centralises power in one individual unlike the parliamentary system, where the Prime Minister is the first among equals. The surrender to the authority of one individual, as in the presidential system, is dangerous for democracy.
- The over-centralisation of power in one individual is something we have to guard against. Those who argue in favour of a presidential system often state that the safeguards and checks are in place: that a powerful President can be stalled by a powerful legislature. But if the legislature is dominated by the same party to which the President belongs, a charismatic President or a "strong President" may prevent any move from the legislature.



The presidential system's reputation in India is sullied because its name became associated with an autocrat. How exactly does the American structure make it impossible for the president to become a dictator?

- First, there is the federal structure. The state governments are genuinely sovereign. They cannot be controlled, even by the combined forces of Congress and the president.
- Second, the executive, legislative and judiciary are not just separate in powers but in institutions. Each institution derives its legitimacy directly from the people, not from another branch.
- Third, each institution is balanced with others. In the legislature, the balance is between the House and the Senate, and then with the president. In the judiciary it is with the executive and legislature, and with the states. The executive is balanced with the Senate with regard to treaties and appointments.
- Lastly, the people hold direct sway over them all. They elect the legislative and the executive branches separately.

### **Need for a shift:**

Our parliamentary system is a perversity only the British could have devised: to vote for a legislature in order to form the executive. It has created a unique breed of legislator, largely unqualified to legislate, who has sought election only in order to wield executive power. There is no genuine separation of powers: the legislature cannot truly hold the executive accountable since the government wields the majority in the House. The parliamentary system does not permit the existence of a legislature distinct from the executive, applying its collective mind freely to the nation's laws.

- For 25 years till 2014, our system has also produced coalition governments which have been obliged to focus more on politics than on policy or performance. It has forced governments to concentrate less on governing than on staying in office, and obliged them to cater to the lowest common denominator of their coalitions, since withdrawal of support can bring governments down. The parliamentary system has distorted the voting preferences of an electorate that knows which individuals it wants but not necessarily which parties or policies.
- Besides, India's many challenges require political arrangements that permit decisive action, whereas ours increasingly promote drift and indecision. We must have a system of government whose leaders can focus on governance rather than on staying in power.

### **Concerns in the Indian context:**

The notion that the presidential system could lapse into dictatorship took root first during Indira Gandhi's Emergency in the mid-1970s. It was widely believed that she wanted to adopt the presidential form of government to further her own autocratic reign.

The fallacy that the presidential system has autocratic tendencies, however, still prevails.

### ***Why Presidential system may not be suitable for India?***

- A diverse country like India cannot function without consensus-building. This "winner takes it all" approach, which is a necessary consequence of the presidential system, is likely to lead to a situation where the views of an individual can ride roughshod over the interests of different segments.
- The other argument, that it is easier to bring talent to governance in a presidential system, is specious. Besides, 'outside' talent can be brought in a parliamentary system too. On the other hand, bringing 'outside' talent in a presidential system without people being democratically elected would deter people from giving independent advice to the chief executive because they owe their appointment to him/her.
- Those who speak in favour of a presidential system have only the Centre in mind. They have not thought of the logical consequence, which is that we will have to move simultaneously to a "gubernatorial" form in the States. A switch at the Centre will also require a change in the States.

### **Way ahead:**

However, a switchover to the presidential system is not possible under our present constitutional scheme because of the 'basic structure' doctrine propounded by the Supreme Court in 1973 which has been accepted by the political class without reservation, except for an abortive attempt during the Emergency by Indira Gandhi's government to have it overturned. The Constituent Assembly had made an informed choice after considering both the British model and the American model and after Dr. B.R. Ambedkar had drawn up a balance sheet of their merits and demerits. To alter the informed choice made by the Constituent Assembly would violate the 'basic structure' of the Constitution.

### **Conclusion:**

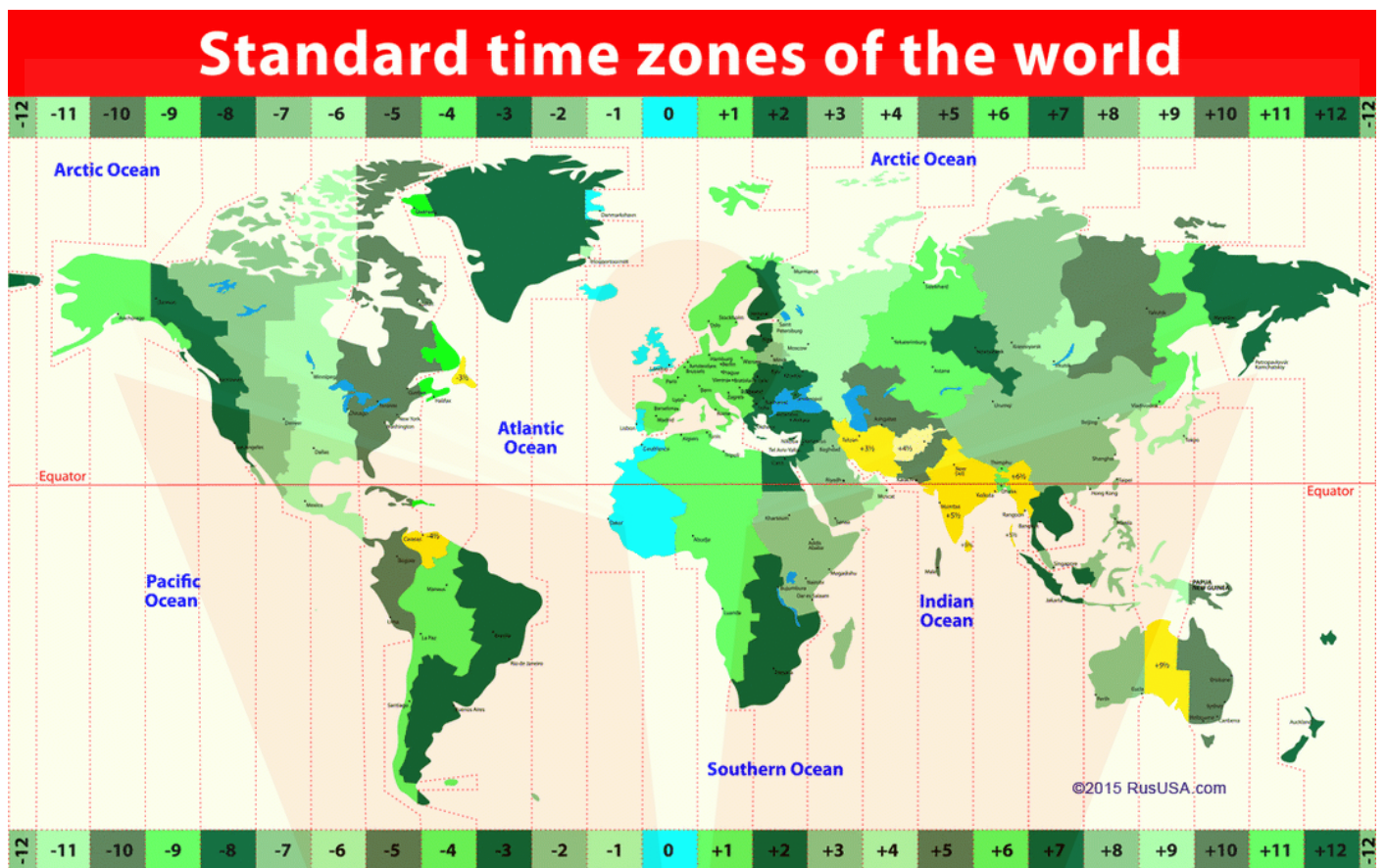
The system of government under which man lives is fundamental to his being. Government is behind every evil in society, and every virtue. It shapes a society's character. A good government allows individuals to become honest and virtuous; a bad one makes them wicked and corrupt. A system of government, therefore, isn't simply a matter of man's prosperity or liberty; it is also a matter of his morality. For a nation to prosper, its political system must foster a national vision, ensure fairness and encourage participation. When a nation has vision, when its citizens' efforts are fairly

rewarded and when there are opportunities for participation, the nation rises. Hence, an informed debate is necessary in this regard.

## 25/03 - One India, two time zones

### Summary:

The Gauhati High Court has dismissed a public interest litigation seeking a direction from the Central government to notify a separate time zone for the Northeast. The court cites a high-level committee study, constituted by the Ministry of Science and Technology, that recognised the difficulties faced by a single time zone in eastern India but concluded that Indian Standard Time (IST) should nonetheless be retained.



### Background:

The time difference between the westernmost part of India and the easternmost point is approximately two hours, the effect of which is that the sun rises and sets much earlier than it does in the rest of the country. Most Indians are not particularly worried about Indian Standard Time (IST), except for those who live in the Northeast where the sun rises around 4 a.m. in summer, and gets dark well before 4 p.m. in winter.

### Need for new time zone:

- Legislators, activists, industrialists and ordinary citizens from the Northeast have often complained about the effect of IST on their lives, and pursued the issue of having a separate time zone with the Central government, without much success.
- In the Northeast, the sun rises as early as four in the morning and in winter it sets by four in the evening. By the time government offices or educational institutions open, many daylight hours are already lost. In winter this problem gets even more accentuated and the ecological costs are a disaster with much more electricity having to be consumed.

## **Problems of time zones:**

- India has a huge population; if the country were divided into two time zones, there would be chaos at the border between the two zones. It would mean resetting clocks with each crossing of the time zone. There is scope for more dangerous kinds of confusion. Railway signals are not fully automated and many routes have single tracks. Trains may meet with major accidents owing to human errors. Just one such accident would wipe out any benefits resulting from different time zones in the country.
- Partitioning the already divided country further into time zones may also have undesirable political consequences. Moreover, our research shows that the energy saving from creating two time zones is not particularly large.
- While there is merit in the argument, the potentially adverse consequences of introducing a new time zone within the country are many. Not forgetting the fact that a country like Russia has as many as nine time zones across contiguous territory, having to cope with the zones and to be forced to reset the watch each time you need to cross a domestic line could be complicated.
- With a time difference of one hour in the mornings and in the evenings, there would be nearly 25% less overlap between office timings in the two zones. This could be important for banks, offices, industries and multinational companies which need to be constantly interconnected. This will be further detrimental to productivity and to the interests of the eastern region.
- There is already a sense of alienation between the relatively prosperous and industrialised western zone and the less developed eastern zone. The people in the Northeast sense a distance from the mainland and a separateness in clock time may accentuate it.
- Having a separate time zone for the eastern region will provide no energy or other benefits to the rest of the country. Moreover, India will continue to be in off-set time zones, five and a half hours in the west and six and a half in the eastern region ahead of.

## **Problems of DST:**

There is also the practice in several countries, of “Daylight Saving Time” (DST), wherein the time in summer is advanced (or the clocks put forward) by one hour and retracted during winter. This enables people to enjoy sunlight longer in summer and avoid the inconveniences of late sunrises and early sunsets during winter.

If we were to introduce DST in India, the inconvenience of time adjustment during summer and winter months would involve the whole country, happening twice a year, with marginal benefits. The possibilities of rail accidents would still be high. Even in the U.S. and Canada, road accidents increase discernibly in the days immediately following the change.

## **Is there any alternative?**

One proposal is to introduce neither time zones nor DST, but to advance IST by half an hour to being six hours ahead of GMT, once and permanently. Such a suggestion has been made before, but until now no one has computed the energy savings that would accrue as a result using a correct model and dependable data.

This proposal of advancing IST by half an hour avoids the problems apprehended in the other two proposals (of time zones and DST) but provides maximum energy saving during evening hours when the utilities fail to supply continuous power.

## **How is energy saved?**

Energy is saved by longer use of sunlight and consequently less use of energy for lighting. The demand for electricity goes up in the morning for water heating and increases again in the evening for five to six hours, mainly for lighting, declining as people turn off lights and go to bed. The advancement of IST by half an hour only is unlikely to alter their habits and a person waking at 7 a.m. and going to bed at 11 p.m. will continue to do so, but advanced 7 a.m. is unaltered 6.30 a.m. when the sun is already up in most parts of the country, and 11 p.m. is the same as unaltered

10.30 p.m. In other words, people all over India will go to bed and wake up half an hour before they presently do and thus their waking hours will be more aligned to the daily cycle of sunshine. One assumption of course is that office times and factory times remain unaltered. It needs to be understood that people switch on lights not by looking at the watch but by the descending darkness after sunset. If on a particular day it got dark at 6 p.m., in say Mumbai, it will still get dark at the same time but the watch would show 6.30, since it has been put forward by half an hour.

Assuming lights kept turned on for five hours from 6 to 11 (bedtime) now will be kept on from 6.30 to 11 (bedtime), that is for 4.5 hours, the half-hour saving on lighting leads to an energy saving of 2.3 billion units of energy per year for the country. This saving amounts to almost 18% of evening peaking energy use, and would partly reduce the deficit that we presently suffer. The savings from time zones and DST are significantly less — the saving due to time zones comes from the eastern zone only, and for DST from half the year. The half-hour advancement of IST provides benefits for the whole country for the whole year. Besides saving energy, a longer sunlit evening would reduce street crimes. Traffic accidents may also come down to some extent.

By advancing IST by half an hour we meet the legitimate demands of the Northeast halfway without any of the inconveniences of time zones or DST.

### Conclusion:

It is now time to initiate a process of consultation to consider all sides of the question afresh. What might be seriously examined is a proposal of some researchers, including those from the National Institute of Advanced Studies in Bangalore, to set the IST forward by half an hour so that it is six hours ahead of Universal Coordinated Time. This will mean advancing the point of reckoning at 82.5 degree East to 90 degree East, which will fall at a longitude along the West Bengal-Assam border. That should go some way in meeting Assam's demand, and help avoid potential grievances from northwestern India about corresponding inconveniences that an advancing by one full hour could entail for it in terms of late sunrise time.

## 27/03 - The river as being

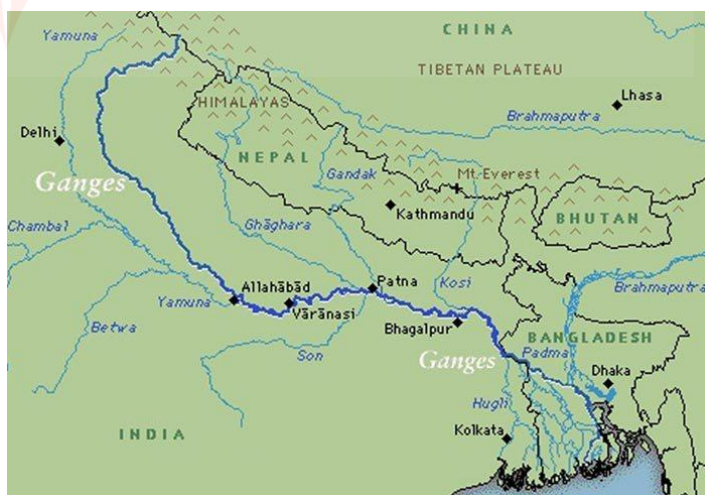
### Summary:

In a recent judgment, the Uttarakhand High Court declared **the rivers Yamuna and Ganga as legal or juridical persons, enjoying all the rights, duties and liabilities of a living person**. Indian courts have granted this status to temple deities, religious books, corporations, etc., but **it is for the first time that an element of the natural environment has been declared a legal person**. And it is not just the two rivers — all their tributaries, streams, every natural water body flowing continuously or intermittently of these rivers will enjoy this status.

The court ordered that the **Director of the Namami Gange programme, the Uttarakhand Chief Secretary, and the Advocate-General of Uttarakhand would serve as “parents” for the rivers and would be the human faces to “protect, conserve and preserve” the rivers and their tributaries.**

### What was this case about?

The two issues before the High Court were: removal of illegal constructions on the banks of a canal in Dehradun, and the division of water resources between Uttar Pradesh and Uttarakhand (which had not been resolved since the formation of the new State). In December 2016, the High Court directed the removal of the constructions. It also directed the constitution of the Ganga Management Board (a statutory body under the U.P. Reorganisation Act 2000), and prohibited mining of the Ganga riverbed and its highest flood plain area. On



the issue of resource division, the court directed the Central government to notify the settlement reached by the two States in a time-bound manner.

Three months later, when the matter came up before the court once again, the encroachments were still there, the settlement between the States was yet to take place, and the board had not been constituted.

### **Implications of this move:**

- The Ganga and Yamuna, all their tributaries, streams are declared as juristic or legal persons or living entities having the status of a legal person with all corresponding rights, duties and liabilities of a living person in order to preserve and conserve river Ganga and Yamuna.
- The two rivers thus have the right to be legally protected and not be harmed/destroyed. They can also be parties to disputes. The rights, experts say, can be used to protect the interests of the rivers.

### **Background:**

While the idea of a river being recognised as a 'living entity' might be new to India, nature having legal rights is a concept already codified in countries like Ecuador and New Zealand.

**Ecuador actually became the first country to recognise the 'Rights of Nature' in its Constitution.** Rather than treating it as a property, and hence right-less, the constitution treats nature as having the "right to exist, persist, maintain and regenerate its vital cycles."

It was only a few days ago that New Zealand's Whanganui River won personhood rights.

### **What necessitated this move?**

The judges said that such a situation had arisen as the rivers were losing "their very existence".

- In 2012, the National Cancer Registry Programme, under the Indian Council of Medical Research and in a detailed study, called the Ganga a "cancer-causing river". They said the amount of pollutants and toxins and heavy metals had made the river a health hazard to people living on her banks. The NCPR Head said, "We know that the incidence of cancer was highest in the country in areas drained by the Ganga". Over 1,500 million litres of raw sewage is discharged into the Ganga every day; 700 highly polluting industries on its banks dump close to 500 million litres of industrial waste; we know that close to 60% of solid waste not collected by the waste management boards ends up in rivers.
- The Yamuna, on the other hand, has been declared a dead river. The dissolved oxygen level, which are crucial to life in the water, is negligible. The river usually flows with heavy toxic foam on its surface and often parts of the river actually catch fire. Ostensibly, in the last 22 years, over Rs. 2,000 crore has been spent on the clean-up of the Yamuna.
- Successive governments have allocated money and failed to help the rivers. In 2014-2015, an RTI shows that 2,100 crores was allocated for the Ganga Clean-up under the Prime Minister's Namami Ganga project, of which only about 300 crores have been used while 1,700 crores lies unspent. In total, over the years under various governments, 20,000 crores have been spent on "cleaning the Ganga". Things are worse than ever for both rivers.

### **Concerns:**

This new order by the Uttarakhand High Court makes it illegal now for anyone to "harm" these living entities. If a river's life is dependent on her flow and her healthy ecosystem, then the questions are: will all activities that impinge on the flowing of a river – dams, sand mining, appropriation of flood banks for commercial activities, throwing plastic bags with prasada from temples, industrial waste, sewage, garbage dumping, encroachments for canals and indeed, the diversion of water for agriculture, illegal fishing and other uses – now come under heavy scrutiny? Can the river file a case against any person or persons performing actions she considers a violation of her rights? Yes, the rivers will have human guardians to interpret the rights, but does this mean a new era on environment protection has dawned?

## Conclusion:

A river is not just a body of water. Scientifically and biologically, she is a living ecosystem. Which means the river and her denizens are one bound, living organism. Both need the other to function symbiotically. One cannot call the river a living entity legally without recognising that the flora and fauna of the river are that living entity's blood and bone. It is for the Centre and the states and peoples to study the legal and political implications of the Uttarakhand court order and take remedial action if their interests are adversely affected.

## 28/03 - The mistrust of Science

### Summary:

India's plans for a world-class neutrino facility have hit a serious roadblock. Regulators this week directed the India-based Neutrino Observatory (INO) to seek new environmental permits, pushing the long-delayed facility's completion further into the future—and further jeopardizing its hopes of making an important discovery.

### About the project:

The \$220 million INO would be installed deep under a mountain in Tamil Nadu. It aims to solve the neutrino mass hierarchy: to determine, that is, which of the three types of neutrinos is heaviest and which is lightest. That arcane knowledge would allow physicists to probe long-standing mysteries such as how neutrinos acquire mass and why the universe has so much more matter than antimatter.

### NEUTRINOS

**ARE THE** second most abundant subatomic particles after photons, and one of the several fundamental particles the universe is built of. They have no charge, but are thought to have a small, as-yet-undetermined, mass. They are everywhere, but are extremely difficult to detect because they interact poorly with other objects, passing through the human body without a trace.

### INO PROJECT

**WILL PLACE** a specially-built iron calorimeter (ICAL) detector about 1.5 km under the ground, where the chances of detecting neutrinos are higher. The project will aim to determine the mass of neutrinos, and to establish a "mass order" among the three known types of neutrinos – electron, muon and tau.

### KEY FACTS

**NEUTRINOS** are thought to have been produced just after the Big Bang that created the universe. The neutrino density of the universe is 330 per cubic centimetre.

**100 TRILLION** neutrinos are believed to pass through the human body every second.

**RS 1,500 CR** is the estimated cost of the project. Building the lab is likely to cost Rs 470 cr.

**50,000 TONNES** of magnets will make up the iron calorimeter detector.

**23 INSTITUTIONS** are part of the project, involving over 100 engineers and physicists.

### PROJECTS ELSEWHERE

**CHINA:** Jiangmen Underground Neutrino Observatory in Kaiping, Jiangmen, aims to determine mass hierarchy of the three types of neutrinos and their oscillation properties, using a 20,000-tonne liquid scintillator detector.

**JAPAN:** Hyper-Kamiokande detector at the Kamioka Observatory in Hida aims to determine mass hierarchy and study cosmic neutrinos, using 2 cylindrical tanks filled with 1 million metric tonnes of ultrapure water as detector.

**EUROPE:** The Large Apparatus studying Grand Unification and Neutrino Astrophysics, or LAGUNA, is a European project aimed at building a next-generation neutrino observatory.

### What are neutrinos?

Neutrinos, first proposed by Swiss scientist Wolfgang Pauli in 1930, are the second most widely occurring particle in the universe, only second to photons, the particle which makes up light.

In fact, neutrinos are so abundant among us that every second, there are more than 100 trillion of them passing right through each of us — we never even notice them.

Neutrinos occur in **three different types**, or flavours. These are separated in terms of different masses. From experiments so far, we know that **neutrinos have a tiny mass**, but the ordering of the neutrino mass states is not known and is one of the key questions that remain unanswered till today. This is a major challenge INO will set to resolve, thus completing our picture of the neutrino.

Neutrinos are very important for our scientific progress and technological growth for three reasons:

- First, they are **abundant**.
- Second, they have very **feeble mass** and **no charge** and hence **can travel** through planets, stars, rocks and human bodies **without any interaction**. In fact, a beam of trillions of neutrinos can travel thousands of kilometres through a rock before an interaction with a single atom of the rock and the neutrino occurs.
- Third, **they hide within them a vast pool of knowledge** and could open up new vistas in the fields of astronomy and astrophysics, communication and even in medical imaging, through the detector spin-offs

### Why study neutrinos?

First, neutrinos may have **a role to play in nuclear non-proliferation through the remote monitoring of nuclear reactors**. The plutonium-239 which is made via nuclear transmutation in the reactor from uranium-238 can potentially be used in nuclear devices by terrorist groups. Using appropriate neutrino detectors, the plutonium content can be monitored remotely and used to detect any pilferage. Neutrino research can be our answer to ensure that no terror group ever acquires nuclear weapons.

Second, **understanding neutrinos can help us detect mineral and oil deposits deep in the earth**. Neutrinos tend to change their “flavour” depending on how far they have travelled and how much matter they have passed through in the way. Far more importantly, **this same property might help us detect early geological defects deep within the earth**, and thereby might be the answer to **an early warning system against earthquakes**.

Third, as we now know, neutrinos can pass right through the earth. They may open up a **faster way to send data than the current ‘around the earth’ model**, using towers, cables or satellites. Such a communication system using neutrinos will be free of transmission losses as neutrinos rarely react with the atoms in their path. This can open up new vistas for telecom and Internet services. Some scientists further believe that if there is **any extraterrestrial form of life, neutrinos will also be the fastest and most trusted way to communicate with them**.

Fourth, **neutrinos are the information bearers of the universe** — which are almost never lost in their path. India’s effort in studying neutrinos at INO may help us unravel the deepest mystery of the universe — why there is more matter than antimatter in the universe.

Besides, **neutrino research can help us understand dark matter**. Dark matter and dark energy make up 95% of the universe, far more predominant than ordinary matter in the universe — but we hardly understand it. Neutrinos are the only way to detect this great mystery which may completely alter our understanding of the universe and physics. Searches for this dark matter can only be carried out in INO.

### Developments so far:

Indian physicists originally hoped to have the INO up and running by 2012. That target evaporated in 2009, when India’s environment ministry denied permission to construct the INO on the edge of prime elephant habitat in Tamil Nadu state. The project team then found an alternative site in the Bodi West Hills, also in Tamil Nadu. The new government approved the INO in January 2015, and a new completion date was set for 2020.

- Work stalled again in March 2015, when a court ordered the INO project team to seek a pollution control permit. Critics claim that blasting rock to carve the observatory’s access tunnel and experimental hall would disrupt local ecology, including in nearby **Mathikettan Shola National Park**.

- Now, the tribunal directed the INO to seek a new permit from the central government as well as get clearance from the National Board for Wildlife, which oversees Mathikettan Shola National Park, and put the project through another environmental impact assessment.

### **Implications of this move:**

The tribunal's order will cause a serious delay in starting the project. That means the INO will fall further behind other facilities gunning for the neutrino mass hierarchy, including China's Jiangmen Underground Neutrino Observatory, expected to open in 2019.

### **Why is it being opposed?**

The proposed massive neutrino detector will be built in a cavern set in massive **charnockite rock**. The cavern will be excavated by drilling a tunnel of 1.9 to 2 km in length, so that there is vertical overburden of about 1300 m. **For a good neutrino detection facility, a vertical cover of at least 1000 m is required, so that the observed neutrino events are not contaminated by unwanted particles that will be absorbed by the overburden.**

However, there have been several doubts raised by protestors such as **possible radiation from the project and the apprehension that the mountain where the tunnel would be drilled would become unstable**. There are also fears that there would be **use of hazardous chemicals and gases**.

### **What scientists say on environmental concerns?**

The scientists promoting the project have said that such apprehensions of protestors are unjustified. They say that **there will be no radiation emitting from the lab, as the lab is that deep in the earth to keep out radiation**.

It is further said that **the lab will not affect the structural stability of the mountain**. While making the tunnel, the technological advancement will ensure that the environment is left untouched; at the most, the rock blasting will cause flutters, but that won't last long and normal conditions will be restored in quick time.

To ensure safety of the experiment and the people, the **gases will be recycled many times and only then let off in controlled amount**. The equipment and the gases used for the experiment will be hermetically sealed, so that there would be no chance of any pollution/contamination from there.

### **What scientists say on the need for the project?**

According to the scientists, this India based neutrino observatory is a particle physics research project, proposed to be implemented to primarily study atmospheric neutrinos. The project is anticipated to provide a precise measurement of neutrino mixing parameters.

- The field of neutrino physics has attracted world wide attention and there is a need to understand many questions put forth by the phenomena of neutrino oscillations. The Super Kamiokande neutrino observatory in Japan, Sudbury Neutrino Observatory in Canada, Gran Sasso Lab in Italy, IceCube Neutrino Observatory in the South Pole are some of the existing neutrino laboratories in the world.
- As far as India is concerned, this is a **Mega Science Project**, that would **enable India to join the group of elite countries that are conducting research on such advanced field, so that India will not be left behind in the global scientific pursuits**.
- Obviously, the scientists are thrilled about this project, since it would place India in the league of advanced nations who carry out such research project, with China particularly considering such research project as thrust areas for long term scientific pursuits.

### **Need to engage local people:**

Critics seem to be of view that such advanced science and technology oriented Rs.1500 crore project is only of academic research at this stage, with the end results of the investment and efforts not being clearly known or defined

or explained. Critics wonder whether India should initiate a research activity for the sake of research, while there is lack of clarity on the outcome.

- Common men in the country and the tax payers expect to be told in precise and quantitative terms about the long term targets, objectives and envisaged benefits of this programme. They seem to think that they only got vague explanations, which only adds to confusion about the need for such project, even amongst those who are favourably inclined towards research pursuits.
- Scientists simply say that the project will benefit the country by enhancing India's scientific manpower. They claim that the use of state of the art technologies in the design and development of the project would build a technologically stronger nation. Beyond that, any tangible explanation involving facts to explain the commercial worthiness of the investments have not been advanced to satisfy the anxious queries from the common men of India.
- While the activists and local people seem to be concerned more about the safety issues at this stage, the fact is that the commercial and technical justification for the project in simple style that can be communicated to the common men has been conspicuous by absence. This makes it difficult to study the cost benefit analysis of the project.

### Way ahead:

This appears to be a repeated problem in India that the government and the scientific community do not adequately communicate with the common men and local people in transparent style with regard to the objectives of their activities and the risk factors, if any, that are involved. Lack of transparency and communication with the country men and local people is the real cause for delay and controversies in the case of several projects. Neutrino project is one more example of such approach of the scientific community and the government with regard to the conceived projects for implementation.

### Conclusion:

It is true that, sometimes, the objective of scientific pursuits in a particular direction are more based on expectations and hopes and discovery of unknown factors that may be of great significance. Even in such case, this should be explained to the people in straight forward manner. If this investment in neutrino project is a calculated risk from the point of view of commercial terms, let it be told to people. Many concerned people may support the project even if there would be a calculated risk considering the overall possible benefits. Besides, the INO project is good old science; rather than shying away from it, we must embrace it and assert our stake in it.

## 29/03 - Why India needs a new logistics network?

### Summary:

The need for **new logistics network has always been felt in the country**. Yet to be introduced **GST and Make in India programme also demand a new modern logistics network** that integrates the domestic network, and allows inputs, components and finished goods to move across the country seamlessly.

### An integrated efficient logistics network is needed for the following reasons:

- Efficient transportation and logistics are important for **boosting India's competitiveness**. They reduce transport time and costs, of course—but they also reduce cost of production by minimizing the need for large inventories. This means less capital required for warehouses, insurance and the like.
- While the conventional view of demand in the logistics sector states that it is derived demand, growth in transport and logistics enterprises can **create markets for other goods**.
- Efficient logistics networks **can reduce divergence in regional growth**.

- As the last Economic Survey points out, inter-state trade flows in India stand at a healthy 54% of GDP. Reducing friction via **improved logistics could boost this**.
- While the demand for transport grew at around 10% annually in the 1990s, it has accelerated since. Failing to keep pace will hamstring everything from the manufacturing push and attempts to boost farmer earnings to the benefits of urban agglomeration economies.

### Challenges ahead:

The main hurdle so far has been that **India's logistics and transport sector has developed in silos**. This has resulted in overly complex regulation and administrative procedures as well as missing modal links and an inefficient modal mix.

- As of 2008, the mix was 50% of total freight flow via roads, 36% by rail, 7.5% by pipelines, 6% by coastal shipping, 0.2% by inland waterways and 0.01% by airways. The ratios may have shifted somewhat since then but they are unlikely to have changed substantially.
- This is a pity: Transport by rail and inland waterways is far more cost- and time-efficient than transport by roads, for instance, and should account for high proportions of the freight flow.



### Proposal in this regard:

In his last budget speech, Union finance minister Arun Jaitley said: *“An effective multi-modal logistics and transport sector will make our economy more competitive. A specific programme for development of multi-modal logistics parks, together with multi-modal transport facilities, will be drawn up and implemented.”*

- This programme aims to **shift from India's current point-to-point logistics model to a hub-and-spoke model**. This will entail setting up 35 multi-modal logistics parks at a cost of Rs50,000 crore, developing 50 economic corridors and inviting investment from the states and private sector.
- Crucially, this will all be done with an integrated approach that will utilize railways, highways, inland waterways and airports to create a transportation grid that covers the country.

### Significance of this move:

The **new integrated policy pulls together the planned road and rail dedicated freight corridors and suggests a solution to the long-running lack of last-mile connectivity for India's ports**.

It also **offers more scope for boosting the use of technology** than development in silos would. Containerization, for instance—shipping freight across modes in standard containers—would enable live tracking via chipped containers. This in turn would enable greater security and predictability, as well as providing the granular data that is important for business projections and policymaking alike.

### Conclusion:

An integrated multi-modal policy is not a new idea. In 2014, the national transport development policy committee had written in its report to the erstwhile Planning Commission that India should have “a single unified ministry with a clear mandate to deliver a multi-modal transport system that contributes to the country's larger development goals”—standard operating procedure for other large economies and India's major emerging economy peers. Now, this is an opportunity for the government to make competitive federalism a plank of its economic agenda. This is a chance to see it in action.

## 30/03 - The dragon at the NSG high table

### Summary:

As India continues to push for a seat in the NSG, it seems an uphill task, and the view from the Hill isn't rosy either. Many countries, mainly China and Italy, stand opposed to India's bid. Speculation is rife if over the next two years, either India or India and Pakistan or none could make it through the NSG.

In the **NSG plenary session in Seoul in June 2016**, New Delhi blamed Beijing for the

"Consensus Minus One" hurdle to its bid even though close to a dozen countries including Mexico, Brazil, Norway, Ireland expressed serious reservations over India not being signatory to the "Non Proliferation Treaty."



### What is NSG?

Nuclear Suppliers Group (NSG) is a multinational body **concerned with reducing nuclear proliferation by controlling the export and re-transfer of materials** that may be applicable to nuclear weapon development and by improving safeguards and protection on existing materials.

Interestingly, the **NSG was set up in 1974 as a reaction to India's nuclear tests** to stop what it called the misuse of nuclear material meant for peaceful purposes. Currently, it has 48 members.

### Why China is opposing India's entry into the NSG?

**India is not a member of the NPT.** It is a point that China has consistently raised while trying to block India's membership to the NSG. China has also averred that **for non-NPT members some definite criteria should be evolved rather than granting country specific waivers.** At other times, it has stated that Pakistan also has similar credentials to join the NSG; and that **if India is admitted, Pakistan should also be admitted simultaneously.**

China has also maintained that there are several countries which have reservations about India's membership of the NSG. Further, **if only India were to be admitted, it would disturb the nuclear-arms balance in South Asia** as India will engage in a massive nuclear weaponisation programme. Finally, China has stated that India's membership will "jeopardise" China's national interests and touch a "raw nerve" in Pakistan.

### Benefits associated with NSG's membership:

- Analysts say joining the NSG is chiefly a **matter of pride** and desire to be taken seriously by some of the world's most powerful nations. Since prompting international technology sanctions and limits on exports by conducting nuclear tests in 1998, India has been eager to gain legitimacy as a nuclear power.
- Joining the NSG will give India **better access to low-cost, clean nuclear energy** — important for its economic growth. Nuclear power is one way India, the third-biggest emitter of greenhouse gases, could cut its emissions and reduce air pollution from coal-fired power plants.
- NSG membership would put **India on a firmer footing to propose the idea of plutonium trade for its thorium programme** that has been waiting in the wings. An early adoption of thorium technology would give India enormous energy independence and security.

### Way ahead:

Most questions raised by China against India's membership have little validity. For instance, **membership of NPT is not a condition for becoming a member of NSG.** It is only a guiding principle to which consideration needs to be given. **Pakistan's credentials for NSG membership are highly flawed and inadequate.**

Over the last eight years India, as per its commitment, has separated its reactors which are under IAEA safeguards and those which are not. Pakistan has a blemished and flawed proliferation record as it has engaged in illicit supply of nuclear technology and materials to Iran, Libya and North Korea. No comparison between the track records of the two countries is hence justified. India maintains that rather than evolving criteria, **its performance should be the basis on which the decision on its application should be taken.**

### What needs to be done?

With the NSG plenary set to meet again **in June this year**, despite technical preparations, a resolution will be difficult to reach without political will. Besides, a green light to India's entry is a political decision that China will have to make.

China may not shy away from advocating keeping out all-weather friend Pakistan in order to keep India out. Therefore, a seat at the high table will be required to influence decisions and nuclear export in future. So, any proposal to woo baiters would have to be window-dressed to look considerate of future bids from other non-NPT players including Israel, instead of appearing to be tailor-made only for India.

While considering India's membership application, the NSG will also have to consider the fact that accepting this application can pose problems on the processing of applications from Pakistan and Israel, both of whom have not signed the NPT.

### Conclusion:

For now, NSG will be an uphill task with China unwilling to play nice. But, both substantively and commensurate with its expanding international prestige and profile, India's membership of NSG is of vital significance.

## 31/03 - Is Aadhaar a breach of privacy?

### Summary:

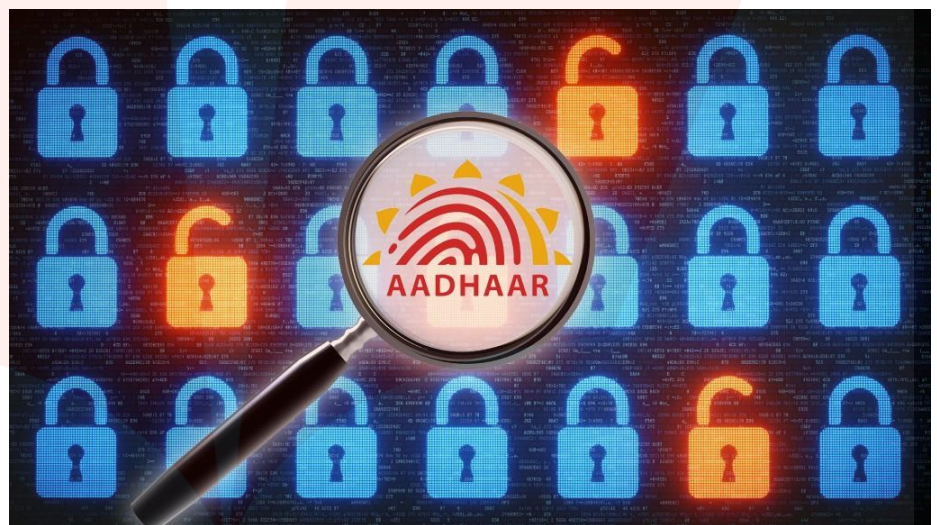
Since its inception, Aadhaar has been criticised as a project which violates privacy. **India not having a law on privacy** has added to this problem. In fact, then chairman of UIDAI, Nandan Nilekani, wrote to the Prime Minister as early as in May 2010 suggesting that there was a need to have a data protection and privacy law.

### Background:

Aadhaar was designed as a **digital identity platform which is inclusive, unique and can be authenticated to participate in any digital transaction.** This has transformed the service delivery in our country, conveniencing residents and **reducing leakages.** Direct benefit transfer, subscription to various services and authentication at the point of service delivery are some of the benefits which have accrued.

### What are the main security concerns related to Aadhar?

- Aadhaar is **mass surveillance technology.** Unlike, targeted surveillance which is a good thing, and essential for national security and public order — **mass surveillance undermines security.**
- Also, experts argue that **biometric information is necessary for targeted surveillance, but not suitable for everyday transactions between the state and law abiding citizens.** It can easily be misused.



- Even though the UIDAI claims that this is a **zero knowledge database** promising high level of security, there is a chance for misuse using the unique identifiers for the registered devices and time stamps that are used for authentication.

### How privacy is ensured in Aadhaar?

- **Aadhaar followed the principle of incorporating privacy by design**, a concept which states that IT projects should be designed with privacy in mind.
- Aadhaar collects only **minimal data**, just sufficient to establish identity. This irreducible set contained only four elements: name, gender, age and communication address of the resident.
- Under the scheme, **random numbers with no intelligence are issued**. This ensures that no profiling can be done as the number does not disclose anything about the person.
- The Aadhaar Act also has clear **restrictions on data sharing**. No data download is permitted, search is not allowed and the only response which UIDAI gives to an authentication request is 'yes' or 'no'. No personal information is divulged.
- Besides the minimal data which UIDAI has about a person, **it does not keep any data except the logs of authentication**. It does not know the purpose of authentication. The transaction details remain with the concerned agency and not with UIDAI.
- UIDAI has also built a **facility wherein one can 'lock' the Aadhaar number and disable it from any type of authentication for a period of one's choice**, guarding against any potential misuse.

### Why there is a need to protect citizen information?

- India is rapidly becoming a **digital economy**. We are a nation of billion cell phones and yet we have antiquated laws for data protection and privacy. Problems of ID theft, fraud and misrepresentation are real concerns.
- Identifying citizens for providing various services, maintaining security and crime-related surveillance and performing governance functions, all involve the **collection of information**. In recent years, owing to technological developments and emerging administrative challenges, several national programmes and schemes are being implemented through information technology platforms, using computerised data collected from citizens.
- With more and more transactions being done over the Internet, such **information is vulnerable to theft and misuse**. Therefore, it is imperative that any system of data collection should factor in privacy risks and include procedures and systems to protect citizen information.

### What should the government do?

- Instead of arguing that **privacy is not a fundamental right**, it should assure the citizens that it has the technology and systems to protect the data collected.
- It should assure the citizens of India that it will do everything possible to prevent unauthorised disclosure of or access to such data.
- It should **recognise all dimensions of the right to privacy and address concerns** about data safety, protection from unauthorised interception, surveillance, use of personal identifiers and bodily privacy.
- The **data controller should be made accountable for the collection, processing and use to which data are put**.

**As an alternative to the collection of biometric information few experts have suggested shifting to smart cards. How will this help?**

- Biometrics allows for identification of citizens even when they don't want to be identified. **Smart cards which require pins on the other hand require the citizens' conscious cooperation** during the identification process.
- Once smart cards are disposed nobody can use them to identify. **Consent is baked into the design of the technology.**
- If the UIDAI adopts smart cards, the centralized database of biometrics can be destroyed just like the UK government did in 2010. This would completely eliminate the risk of foreign government, criminals and terrorists using the breached biometric database to remotely, covertly and non-consensually identify Indians.
- Smart cards based on open standards allow for decentralized authentication by multiple entities and therefore eliminates the **need for a centralized transaction database.**

**Conclusion:**

This century comes with certain risks. Therefore, we need to take a level-headed approach and ensure that ample safeguards are put in place for data protection and privacy. The government should recognise both the need for Aadhaar and the need for stringent rules concerning access to and security of citizens' biometric data, in order to preserve their privacy.



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