



Civil's IAS
Empowering Nation

Weekly Current Affairs Compilations

A holistic magazine for UPSC Prelims, Mains and Interview Preparation

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- a. Total 21 Tests (13 SUBJECTWISE + 5 GS FULL LENGTH + 4 CSAT)

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- a. Coverage of General Studies 1,2,3,4 and ESSAY topics to boost students marks in Mains examination.

10. OPTIONAL

- a. Geography
- b. Gujarati Literature
- c. Anthropology
- d. Political Science
- e. Sociology
- f. Philosophy
- g. History

INDEX

PRELIMS and MAINS TOPICS

1. NATIONAL INSTITUTIONAL RANKING FRAMEWORK
2. HINDI LANGUAGE
3. LION CENSUS
4. INTERNATIONAL CRIMINAL COURT (ICC)
5. INDIAN GAUR
6. NAKU LA
7. WASTEWATER OUTPUT
8. BLUE AND GOLD MACAWS
9. SKILL MAPPING
10. DIABETES
11. GROSS VALUE ADDED
12. GOOGLE
13. COVID-19 TERMINOLOGY
14. POACHING
15. UNSC SEAT
16. VACCINE PROGRAMME
17. LOCKDOWN HIT WOMEN'S JOBS MOST
18. APPROACHING FINANCIAL TRAIN WRECK
19. MIGRATION
20. POLICE FORCES AND DEATHS
21. FOOD SECURITY
22. IFLOWS-MUMBAI
23. US – NK SINGAPORE SUMMIT
24. FUEL PRICES IN INDIA
25. DBO
26. GM SEEDS
27. CHALLENGER DEEP
28. RUSSIA OIL LEAK
29. DELHI EARTHQUAKES
30. GAIRSAIN
31. MIGRANT WORKERS
32. NEAR-EARTH OBJECT (NEO)

FACTS for ANSWER WRITING

1. AGRICULTURE
2. UNEMPLOYMENT
3. COAL
4. CONSTRUCTION

MODEL ANSWER

1. MAHATMA GANDHI

PRELIMS and MAINS TOPICS

TOPIC 1. NATIONAL INSTITUTIONAL RANKING FRAMEWORK

- **Indian Institute of Technology (IIT), Madras** is country's best in field of higher education, according to **National Institutional Ranking Framework (NIRF)** released on 11th June 2020. **Indian Institute of Science (IISc), Bengaluru** stands at second place, followed by **IIT-Delhi**.
- Under universities category, **IISc** topped list, followed by **Jawaharlal Nehru University** and **Banaras Hindu University**. While Delhi University has dropped out of top 10, all best colleges are affiliated to it: **Miranda House** got first rank in colleges category, followed by **Lady Shri Ram College for Women** and **Hindu College**.
- These rankings come a day after **QS World University Rankings** showed that India's best including the IISc and most IITs — have slipped in the global lists. This is due to the high weightage given to the **perception parameter** in most international rankings.
- **PARAMETERS:**
 - **Teaching and Learning,**
 - **Student and Faculty strength,**
 - **use of Financial resources,**
 - **Research Papers and Patents**
 - **Graduation Outcomes.**
 - **Inclusivity and outreach measures, including gender, geographical and socioeconomic diversity and welcoming of differently abled students.**
- Overall, 3,771 institutions registered in ranking framework this year, which is a 20% increase in comparison to last year. All parameters are normalized to keep them size and age independent so as to ensure that larger and older institutions do not get any undue advantage.

THE TOP PERFORMERS IN EACH CATEGORY

OVERALL

1. IIT-MADRAS
2. IISc
3. IIT-DELHI
4. IIT-BOMBAY
5. IIT-KHARAGPUR

UNIVERSITY

1. IISc
2. JNU
3. BHU
4. Amrita Vishwa Vidyapeetham
5. Jadavpur University

COLLEGE

1. Miranda House
2. Lady Shri Ram College for Women
3. Hindu College
4. St. Stephen's College
5. Presidency College

MEDICAL

1. All India Institute of Medical Sciences
2. Post Graduate Institute of Medical Education and Research
3. Christian Medical College

4. National Institute of Mental Health & Neuro Sciences
5. Sanjay Gandhi Postgraduate Institute of Medical Sciences

ENGINEERING

1. IIT-Madras
2. IIT-Delhi
3. IIT-Bombay
4. IIT-Kanpur
5. IIT-Kharagpur

MANAGEMENT

1. IIM-Ahmedabad
2. IIM-Bangalore
3. IIM-Calcutta
4. IIM-Lucknow
5. IIT-Kharagpur

LAW

1. National Law School of India University, Bangalore
2. National Law University, New Delhi
3. Nalsar University of Law
4. IIT-Kharagpur
5. National Law University, Jodhpur

Top institutes

Seven Indian Institutes of Technology (IITs), Indian Institute of Science (IISc), Jawaharlal Nehru University (JNU) and Banaras Hindu University (BHU) were ranked as the top 10 educational institutions of 2020 in the overall category by the National Institutional Ranking Framework (NIRF)



Rank	Institution	State
1	IIT, Madras	T.N.
2	IISc	Karnataka
3	IIT, Delhi	Delhi
4	IIT, Bombay	Maharashtra
5	IIT, Kharagpur	W.B.
6	IIT, Kanpur	U.P.
7	IIT, Guwahati	Assam
8	JNU	Delhi
9	IIT, Roorkee	Uttarakhand
10	BHU	U.P.

- The three top-ranked universities were IISc, JNU and BHU
- The three top-ranked colleges were Miranda House, Lady Shri Ram College for Women, and Hindu College; all part of the Delhi University

THE RANKINGS

Institution Name	QS Ranking 2021	QS Ranking 2020	QS Ranking 2019	QS Ranking 2018
Indian Institute of Technology, Delhi*	193	182	172	172
Indian Institute of Technology, Bombay*	172	152	162	179
Indian Institute of Science, Bangalore*	185	184	162	179
Jadavpur University**	651-700	651-700	601-650	601-650
Anna University**	801-1000	751-800	751-800	651-700
Indian Institute of Technology, Madras**	275	271	264	264
Indian Institute of Technology, Kharagpur**	314	281	295	308
University of Delhi**	501-510	474	487	486
University of Hyderabad**	651-700	601-650	591-600	601-650
Banaras Hindu University**	801-1000	801-1000	801-1000	801-1000
Vellore Institute of Technology**	N/A	801-1000	801-1000	N/A
Kalinga Institute of Technology**	N/A	N/A	N/A	N/A
Amrita Vishwa Vidyapeetham**	801-1000	801-1000	801-1000	N/A
Jamia Hamdard**	N/A	N/A	N/A	N/A
OP Jindal University**	651-700	751-800	N/A	N/A
Shiv Nadar University**	N/A	N/A	N/A	N/A
Manipal Academy of Higher Education*	751-800	701-750	751-800	701-750
Birla Institute of Technology & Science, Pilani*	N/A	801-1000	801-1000	801-1000

*Selected as IoE in 2018

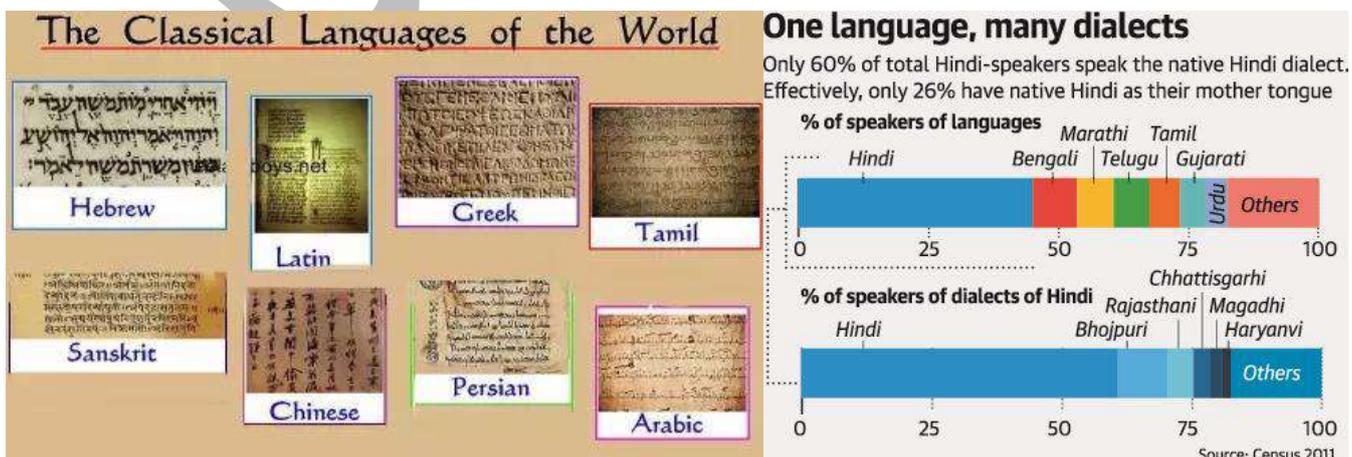
**Selected as IoE in 2019/N/A means institute participated but could not secure a position among the world's top 1,000 institutions"

QS RANKING

- The top five Indian Institutes of Technology and Indian Institute of Science have all dropped in this year's **QS World University rankings**, released on 10th June 2020. Only newer IITs in Guwahati and Hyderabad were able to show improvement.
- The total number of Indian institutions in top 1,000 global list has also fallen from **24 to 21**, despite Centre's flagship Institutes of Eminence scheme, launched two years ago in a bid to boost Indian presence in these global rankings.
- The top seven IITs had jointly decided to boycott Times Higher Education rankings earlier this year, questioning its **methodology and transparency**.
- IIT-Bombay still maintains its position as top institution in India in QS rankings but has slipped 20 places from 152 to 172 in the global list. IISc overtook IIT Delhi to make it to the second place, but still dropped a rank to 185. IIT Delhi fell more than 10 places in the rankings to 193 rank, while IIT Madras is at 275. Both IIT Kharagpur and IIT Kanpur crashed out of the top 300.
- IIT Roorkee maintained its ranking at 383, while IIT Guwahati improved from 491 to 470. IIT Hyderabad entered the top 1,000 for the first time.
- It was a mixed bag for elite private universities. Prestigious names such as BITS Pilani and Vellore Institute of Technology have dropped out of top 1,000 list, but OP Jindal Global University, a new entrant last year, has climbed to the 650-700 band in the rankings.
- "Our success is based on five pillars: our not-for-profit status, strong commitment to faculty hiring and research, a focus on internationalization, devotion to humanities and social sciences, and the drive to build our reputation through students and employers," said Vice-Chancellor at OP Jindal.

TOPIC 2. HINDI LANGUAGE

- The Supreme Court asked a group of lawyers to approach Punjab and Haryana High Court with their grievance against a **Haryana law, which makes Hindi the official language in subordinate courts.**
- Chief Justice Sharad A. Bobde, leading a three-judge Bench, however remarked orally that there was nothing wrong in using Hindi as the official language in courts in certain States, considering that a majority of lawyers were well-versed in the language there and found English a challenge. The apex court finally asked the lawyers to approach the High Court.
- The petition contended that **Haryana Official Language (Amendment) Act of 2020** had **unconstitutionally and arbitrarily imposed Hindi as sole official language to be used in lower courts across the State.**
- Advocates challenged the new Section 3A incorporated into the Act.
- The lawyers argued that English was widely used by advocates and the subordinate judiciary in lower courts in justice administration work. The imposition of Hindi as the sole language would result in an unreasonable classification between lawyers who were fluent in Hindi and those who are not.
- **What are 'Classical' languages in India, and how are they classified?**
 - Currently, six languages enjoy the 'Classical' status:
 - **TAMIL** (declared in 2004),
 - **SANSKRIT** (2005),
 - **KANNADA** (2008),
 - **TELUGU** (2008),
 - **MALAYALAM** (2013)
 - **ODIA** (2014).
- According to information provided by Ministry of Culture in Rajya Sabha in February 2014, **guidelines for declaring a language as 'Classical' are:**
 - High antiquity of its early texts / recorded history over a period of 1500-2000 years;
 - A body of ancient literature / texts which is considered a valuable heritage by generations of speakers;
 - The literary tradition be original and not borrowed from another speech community;
 - The classical language and literature being distinct from modern, there may also be a discontinuity between classical language and its later forms or its offshoots.
- **How are Classical languages promoted?**
 - **BENEFITS** it provides once a language is notified as a Classical language:
 - 2 major annual international awards for scholars of eminence in classical Indian languages
 - A Centre of Excellence for studies in Classical Languages is set up
 - University Grants Commission is requested to create, to start with at least in Central Universities, a certain number of Professional Chairs for Classical Languages.



WORLD'S TOP LANGUAGES

There are 6,900 spoken languages, but 3 out of 7 billion people on earth

SPEAK ONE OF THESE 10 LANGUAGES



Out Of Them In The Top 10 Languages Used

ON THE INTERNET



• The Writing Systems

○ The Indus Valley Script

- *The Indus Valley Script* was a product of the now well-known **Indus Valley Civilization**.
- The greater Indus region was home to the largest of the four ancient urban civilizations, others being the **Egyptian, Mesopotamian, and Chinese civilizations**. Most of its ruins remain to be fully excavated and studied, as nothing was known about this civilization until 1920s.
- What is more, the ancient Indus script has not yet been deciphered – although there have been many claims and counterclaims.
- The samples of Indus Valley Script are huge - about 1000 settlements spreading all of modern Pakistan, and parts of India and Afghanistan. But main corpus of writing includes **2,000 inscribed brief seals and tablets of 6 to 26 symbols each which are still undeciphered**. There are several competing theories about language which Indus script represents. But it appears that there was an equally strong multi-racial and multilingual existence then which has further contributed to difficulties in decipherment.

○ The *Brāhmī* Script

- There were many other systems of writing, but none had as far reaching effect as ***Brāhmī* script**.
- one of **earliest writing systems** in India, *Brāhmī* script had perhaps originated as far back as in **8th Century B.C.**
- Some trace *Brāhmī* to Indus Script. But Harappan ended by 1900 BC & 1st Brahmi and Kharoshthi inscriptions date to roughly 500 BC. It is difficult to explain gap.

- **Brahmi is a "syllabic alphabet", meaning that each character carries a consonant plus a neutral vowel "a", like Old Persian, but unlike it, Brāhmī uses same consonant with extra strokes to combine with different vowels.**
- **The *Kharosthī* Script**
 - *Kharosthi* Script was almost contemporarily with Brāhmī and it appeared by 3rd BC in Northern Pakistan and East Afghanistan. Some examples of Kharosthi are also found in India.
 - Kharosthi was used primarily for **Prakrit dialect** of Gandhari.
 - **In structure and sequence, Kharosthi and Brāhmī are similar, except that Brāhmī had different signs for different initial vowels, but it used same marks that change vowels in Consonant-Vowel combinations, and while Brāhmī had long and short vowel signs, Kharosthi had only one.**
 - Kharosthi Script fell out of use by 3rd or 4th century A.D.
- **Modern-day Writing Systems**
 - Although Indian writing systems number at least 25 in a recent survey, major scripts are 14, out of which 12 originated from the *Brāhmī*.
 - Like Greek alphabet, it had many local variants and gave rise to many Asian scripts - Burmese, Thai, Tibetan, etc.
 - Emperor Asoka inscribed his laws as well as Lord Buddha's teachings onto columns in Brahmi.

Gut.	DEV	GUJ	PUN	BEN	ORI	TEL	KAN	TAM	MAL	SINH	URD	SIND
k	क	ક	ਕ	କ	କ	క	ಕ	க	ക	ක	ک	ڪ
kh	ख	ખ	ਖ	ਖ	ଖ	ఖ	ಖ	-	ഖ	ක	کھ	ڪھ
g	ग	ગ	ਗ	ଗ	ଗ	గ	ಗ	-	ഗ	ග	گ	گ
gh	घ	ઘ	ਘ	ଘ	ଘ	ఘ	ಘ	-	ഘ	ඝ	گھ	گھ
ñ	ङ	ઙ	ਙ	ଙ	ଙ	ఙ	ಙ	ந	ങ	ඞ	گن	گن

- **The Linguistic Recognition**
 - Indian constitution recognizes **22 major languages** of India in what is known as "**8th Schedule**" of Constitution. They also happen to be major literary languages in India, with a considerable volume of writing in them.
 - They include, besides **Sanskrit**, following 21 modern Indian languages: **Assamese, Bangla, Bodo, Dogri, Gujarati, Hindi, Kashmiri, Kannada, Konkani, Maithili, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Tamil, Telugu, Santali, Sindhi and Urdu.**
 - Originally, only 14 languages were included in 8th Schedule of Indian constitution.
 - Bodo, Dogri, Konkani, Maithili, Manipuri, Nepali, Santali and Sindhi were recognized later.
 - The languages listed in this Schedule had acquired different names at different stages.
 - They are better known as ***Scheduled languages*** now.
 - Besides Scheduled languages, Indian Census did record 1,576 rationalized languages as well as 1,796 other mother-tongues.
 - The highest literary awards in country are given in 24 literary languages in India by National Academy of Letters, called '***Sahitya Akademi***'
- **Official Language – Constitutional / Statutory Provisions**
 - **Article 343 (1)** of Constitution provides that **Hindi in Devanagari script** shall be Official Language of the Union.

- **Article 343 (2)** also provided for continuing use of **English in official work of Union** for a period of 15 years (i.e., up to 25 January 1965) from date of commencement of Constitution.
- **Article 343 (3)** empowered parliament to provide by law for continued use of English for official purposes even after 25 January 1965.
 - Accordingly, section 3(2) of the Official Languages Act, 1963 (amended in 1967) provides for continuing the use of English in official work even after 25 January 1965.
 - The Act also lays down that both Hindi and English shall compulsorily be used for certain specified purposes such as Resolutions, General Orders, Rules, Notifications, Administrative and other Reports, Press Communiqués; Administrative and other Reports and Official Papers to be laid before a House or the Houses of Parliament; Contracts, Agreements, Licences, Permits, Tender Notices and Forms of Tender, etc.
- **Language Families in India**
 - Languages spoken in South Asian region belong to at least four major language families:
 - **Indo-European (most of which belong to its sub-branch Indo-Aryan),**
 - **Dravidian,**
 - **Austro-Asiatic**
 - **Sino-Tibetan.**
 - Almost 1/3rd of our mother-tongues (574 languages) belonged to Indo-Aryan family of languages spoken by **73.30% of Indians.**
 - Dravidian languages 153 in number form 2nd major linguistic group of country (**24.47 %**).
 - **0.73 %** of total population of country speaks languages belonging to Tibeto-Burman subfamily, including lone language Khampti, which belongs to Siamese Chinese subfamily of Sino-Tibetan / Tibeto- Chinese family. The number of Sino-Tibetan languages stood at 226.
 - Languages belonging to Austro-Asiatic family of languages 65 in number accounted for a total number of 6.19 million speakers and 530 were still recorded as unclassified languages.
 - **The Indo-Aryan Languages**
 - The largest chunk of languages and mother tongues belong to Indo-Aryan sub-family of Indo-European languages. The immediate predecessor of Indo-Aryan happens to be **Indo-Iranian**, oldest specimens of which are available in **Zend-Avesta**.
 - Among modern Indo-Aryan languages, **Hindi and Bangla** happen to be most well known languages internationally. Hindi of course has about 49 varieties and is spread over a vast tract in North India.
 - **WESTERN HINDI** is a Midland Indo-Aryan language spoken in Gangetic plain and in region immediately to its north and south. Around it on 3 sides are **Panjabi, Gujarati, Rajasthani.**
 - **EASTERN HINDI** is spoken in Oudh and to its south.
 - In outer layer we get languages such as **Kashmiri, Lahnda, Sindhi, Gujarati, Marathi**, in northern and western region and **Oriya, Maithili, Bengali and Assamese** in east.
 - **The Dravidian Languages**
 - The actual word '*Dravidian*' was first used by Robert A. Caldwell, who introduced Sanskrit word Dravida Among Dravidian languages, besides four internationally known languages spread in many parts of world, there are 26 Dravidian languages by current count, of which 25 are spoken in India and one (Brahui) is spoken in Baluchistan on Pakistan-Afghanistan border. Spoken by more than 300 million people in south Asia, **antiquity of Dravidian languages is largely due to rich grammatical and linguistic-literary tradition of Classical Tamil.**
 - Even other major Dravidian languages namely **Malayalam, Kannada, and Telugu** – possess independent scripts and literary histories dating from pre-Christian era.
 - The smaller Dravidian languages include **Kolami-Naiki, Parji-Gadaba, Gondi, Konda, Manda-Kui, Kodagu, Toda-Kota, and Tulu** etc.

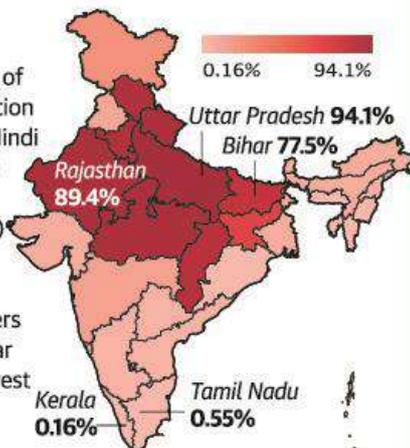
- Northern Group is the smallest: **Brahui, Malto and Kudukh.**
- Central Group of Dravidian languages seem to be most widespread: **Gondi, Konda, Kui, Manda, Parji, Gadaba, Kolami, Pengo, Naiki, Kuvi and Telugu.**
- Southern Group includes **Tulu, Kannada, Kodagu, Toda, Kota, Malayalam and Tamil.**
- **The Austric Family**
 - The Austric family of languages is divided into two branches, **Austroasiatic and Austronesian** latter formerly called Malayo-Polynesian.
 - They are spoken in India, Southeast Asia and Pacific Islands.
 - The **Austroasiatic** branch has three sub-branches: **Munda, Mon-Khmer, and Vietnamese- Muong**, out of which the first one is located in India.
 - The Munda languages in India are spoken in the eastern and southern parts of India.
 - The well-known Munda languages include following: Santali, Mundri, Bhumij, Birhar, Ho, Tri, Korku, Khari, Juang, and Savara, etc.
 - The Munda speakers are found mostly in hills and jungles, while plains and valleys have some pockets inhabited by people speaking these languages. There are accordingly some Aryanized tribes in northern India (like Cheros in Bihar and Chota Nagpur, and Kherwars in Mirzapur area) who have formerly belonged to Munda stock.
- **The Tibeto-Burman Languages**
 - The Tibeto-Burman family is a part of Sino-Tibetan languages, spread over a large area - from Tibet in north to Burma in south, and from Ladakh in west to Chinese provinces of Sze-chuen and Yunnan in east.
 - **Lepcha, Sikkimese, Garo, Bodo, Manipuri, and Naga** are some of better-known Tibeto-Burman languages. Besides a few that are close to Tibetan, South Himalayan languages spoken from Lahul in west (Himachal Pradesh) to Bhutan in east are quite distinct.
 - Bodo and Tipra sub-groups are now well-known, and so are Naga languages.
 - Kuki-Chin, Lushai and Manipuri fall somewhere in between these extreme sub-families.
- **Other Languages**
 - Several smaller languages that cannot easily be fit into any of above large families such as Burushaski in North-West are language isolates. Then there are separate families like Andamanese which would include quite a few diverse languages in Andamans, and one could possibly also add six odd languages spoken in 22 odds Nicobar Islands.
- **Defining the 'MOTHER TONGUE':**
 - The concept of 'mother tongue' is now defined by census as
 - **Language spoken in childhood by person's mother to person.**
 - **If mother died in infancy, language mainly spoken in person's home in childhood.**
 - **In case of infants are deaf - mutes, language usually spoken by mother should be recorded.**
 - **In case of doubt, language mainly spoken in household may be recorded.**
- **Language-Dialect Division:**
 - Determining what should be called a language or a dialect is more a political than a linguistic question.
 - Sometimes word *language* is applied to a standardised and prestigious form, recognised as such over a large geographic area, whereas word *dialect* is used for various forms of speech that lack prestige or that are restricted to certain regions or castes but are still regarded as forms of same language.
 - Sometimes mutual intelligibility is criterion: if speakers can understand each other, even though with some difficulty, they are speaking same language, although they may speak different dialects.
 - However, speakers of Hindi, Urdu, and Punjabi can often understand each other, yet they are regarded as speakers of different languages.

One language, many tongues

A language is an umbrella term which contains many mother tongues. Forty-three % Indians speak the Hindi language, which includes many mother tongues such as Bhojpuri, Rajasthani & Hindi. Close to 40% of the Hindi language speakers speak mother tongues other than Hindi. By **Sumant Sen**

1. State-wise split

The map shows the share of a State's population who speak the Hindi language (which includes many mother tongues) as of 2011. The share of Hindi language speakers is highest in Uttar Pradesh and lowest in Kerala



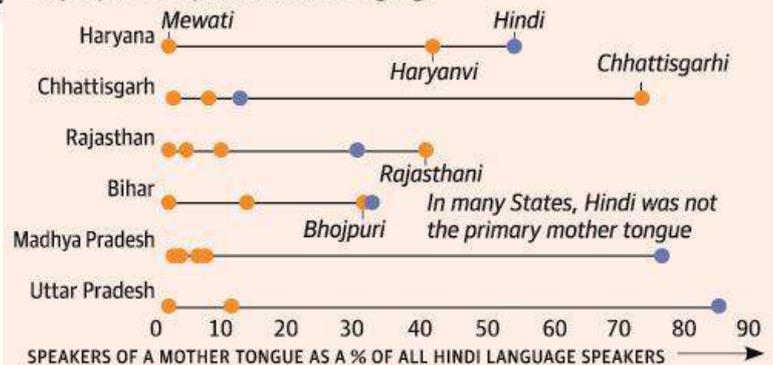
2. Many tongues The Hindi language has 56 mother tongues listed under it. The table lists 10 of those mother tongues which are widely spoken. Each mother tongue's share in the Hindi language is also listed

Mother tongues within the Hindi language	Share of speakers (%)
Hindi	60.99
Bhojpuri	9.57
Rajasthani	4.88
Chhattisgarhi	3.07
Magadhi/Magahi	2.41
Haryanvi	1.86
Khortha/Khotta	1.52
Marwari	1.48
Bundeli/Bundel khandi	1.06
Others	3.65

Source: Census 2011

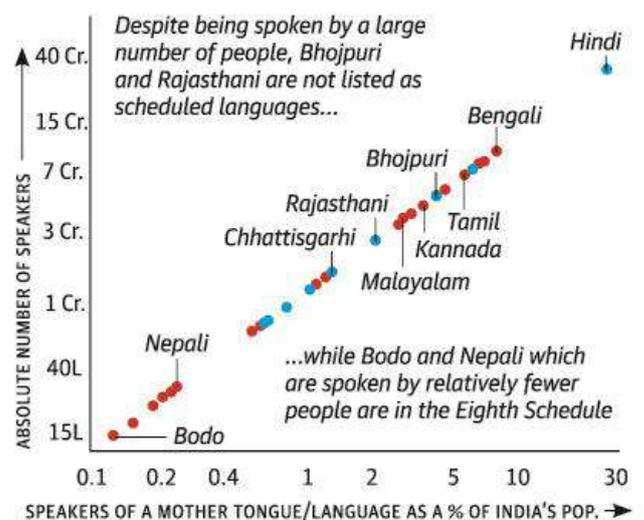
3. Preferred lingo

The chart shows the % of people who speak various mother tongues under the Hindi language. For instance, in Haryana, Haryanvi was the mother tongue of 42% of people who spoke the Hindi language and Hindi was the mother tongue of 54.5% of people who spoke the Hindi language



Listed versus the rest

The chart shows the % of Indians who speak different mother tongues under the 'Hindi' language and the % whose mother tongues are listed under the 22 scheduled languages (included in the Eighth Schedule of the Constitution)



TOPIC 3. LION CENSUS

- Gujarat prides itself on **hosting Asiatic lions exclusively**, and their numbers have now risen to an estimated **674 in Gir forest region** and other revenue areas of coastal Saurashtra.
- The State Forest Department says population is **674 [29% Rise] including males, females, and cubs**. During 2015, baseline was **523 lions**. Moreover, distribution of lions expanded from 22,000 sq. km in 2015 to 30,000 sq. km **[36% Rise]** in 2020.
- **REASONS FOR RISE**
 - **Community Participation**
 - **Emphasis on Technology (Surveillance, Health)**
 - **Wildlife healthcare including import of vaccines**
 - **Proper habitat management and increase in prey base**
 - **steps to minimize human-lion conflict.**
- This year, department carried out a “population estimation exercise” on night of June 5-6 because five-yearly regular census in May could not be held due to COVID-19.

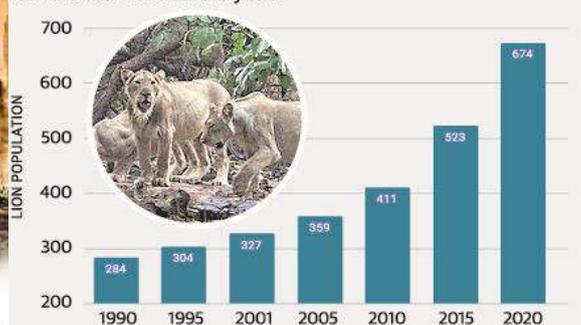
GROWING NUMBERS

Year	Adult		Subadult	Cubs	Total
	Male	Female			
1990	99	95	27	63	284
1995	94	100	39	71	304
2001	101	114	57	55	327
2005	89	124	72	74	359
2010	97	162	75	77	411
2015	109	201	73	140	523
2020	159	262	115	138	674

Source: Gujarat state forest and environment department sources

More the merrier

The number of Asiatic lions in Gir forest in Gujarat has increased by nearly 30% between 2015 and 2020, the highest rise between two census years



- **Why was the Lion Census not conducted this year?**
 - Conducted once every five years, Lion Census was due on June 5-6 this year, but was postponed after the lockdown was announced on March 24. Over 1,500 forest guards, foresters and range forest officers were deputed on policing duty to enforce the lockdown.
 - The Forest Department invites NGOs, experts and wildlife enthusiasts to join the Census for transparency and augmenting manpower, but this time, Forest Minister said on June 3, it was not advisable to send so many people inside forest as Bronx Zoo in New York had reported a case of transmission of novel coronavirus from a human to a tigress.
- **So, how were the numbers estimated?**
 - Through **Poonam Avlokan**, which is a monthly in-house exercise carried out every full moon. Field staff and officers spend 24 hours assessing number of lions and their locations in their respective jurisdictions. It was a mechanism developed by Forest Department in 2014 as part of preparations for 2015 Lion Census.
 - This time, exercise was undertaken from 2 pm Friday to 2 pm Saturday. It covered 10 districts where lion movements have been recorded in recent years, and 13 forest divisions. All these divisions, save Surendranagar and Morbi, were part of 2015 Lion Census too.
- **How is this ‘observation’ different from a regular census?**
 - The Lion Census involves larger participation. Around 2,000 officers, experts and volunteers were involved in 2015 Census. That makes Census more transparent. The lion ‘observation’ this month was conducted by around 1,400 forest staff and a few experts.
 - The Lion Census usually runs for more than two days, including a preliminary census and a final census. It is done using **block counting method** — in which census enumerators remain

stationed at water points in a given block and estimate abundance of lions in that block, based on **direct sighting of lions** who need to drink water at least once in 24 hours during summer.

- A 'lion observation' is an in-house exercise, conducted only by forest staff. The methodology too is different as, instead of remaining stationary at water points, teams keep moving in their respective territories and make their estimates based on inputs provided by lion trackers and on chance sightings.

- **Has the Lion Census ever been postponed before?**

- The first Lion Census was conducted by Nawab of Junagadh in 1936; since 1965, Forest Department has been regularly conducting Lion Census every 5 years. The 6th, 8th and 11th Census were each delayed by a year, for various reasons.
- The 2020 count is particularly important. The 2015 Census had counted 523 lions, up from 411 in 2010. But 12 lions were killed in a flash flood in Amreli just a month after the 2015 census, followed by deaths of more than two dozen lions in an outbreak of canine distemper virus (CDV) and babesiosis in 2018. A babesiosis outbreak was reported in Gir (east) this summer too, and around two dozen lions are reported killed.

TOPIC 4. INTERNATIONAL CRIMINAL COURT (ICC)

- U.S. President 11th June issued an executive order **authorizing sanctions against individuals involved in an International Criminal Court (ICC) investigation into whether U.S. forces committed war crimes in Afghanistan.**
 - ICC probe is “being pushed forward by an **organization of dubious integrity**” and accused Russia of having a role.
 - The order authorizes Secretary of State in consultation with Treasury Secretary to **block assets in U.S. of ICC employees involved in the probe.**
 - It also authorizes **to block entry into U.S. of these individuals.**
- Mr. Trump has repeatedly assailed The Hague-based ICC set-up **to prosecute war crimes, genocide and crimes against humanity.** It has jurisdiction only if a member state is **unable or unwilling to prosecute atrocities itself.**
- Afghanistan is a member of ICC, though Kabul has argued that any war crimes should be prosecuted locally. The U.S. government has never been a member of court, established in 2002. The government imposed travel restrictions and other sanctions against ICC employees a year ago.
- The official said the probe threatens **to infringe on U.S. sovereignty and that while ICC was established to provide accountability,** “in practice court is an unaccountable, ineffective and out-of-control international bureaucracy that threatens American service members and intelligence officers.
- ICC prosecutor Fatou Bensouda wants to investigate possible crimes committed between 2003 and 2014, including alleged mass killings of civilians by Taliban, as well as alleged torture of prisoners by Afghan authorities and to a lesser extent by U.S. forces and CIA.

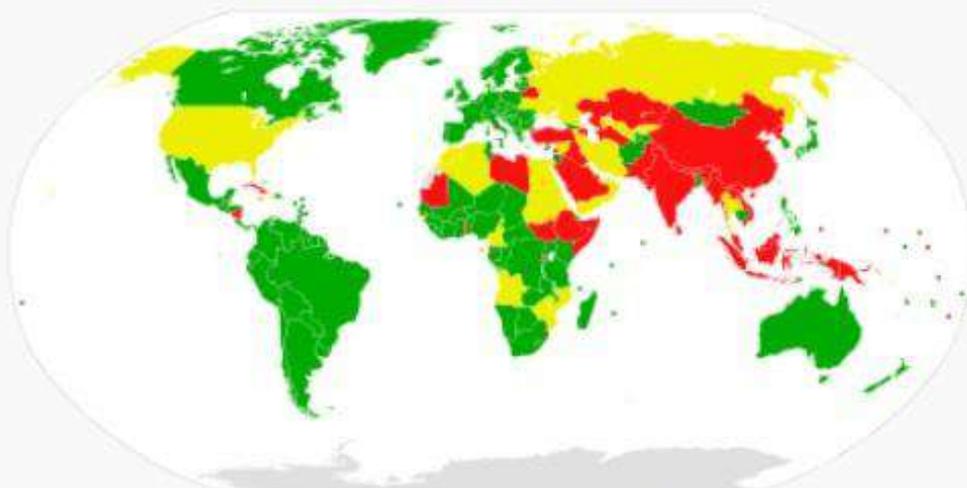
What is International Criminal Court?

- **Rome Statute of 1998**, founding treaty of International Criminal Court
- The Rome Statute established three separate bodies:
 - Assembly of States Parties,
 - International Criminal Court, which comprises four separate organs
 - Trust Fund for Victims.
- International Criminal Court started functioning in 2002 with jurisdiction over four main crimes: **GENOCIDE, CRIMES AGAINST HUMANITY, WAR CRIMES and CRIME OF AGGRESSION.**
 - First, crime of **genocide** is characterized by specific intent to destroy in whole or in part a national, ethnic, racial or religious group by **killing its members or by other means: causing serious bodily or mental harm to members of the group; deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; imposing measures intended to prevent births within the group; or forcibly transferring children of the group to another group.**
 - Second, the ICC can prosecute **crimes against humanity**, which are serious violations committed as part of a large-scale attack against any civilian population. The 15 forms of crimes against humanity listed in Rome Statute include offences such as **murder, rape, imprisonment, enforced disappearances, enslavement – particularly of women and children, sexual slavery, torture, apartheid and deportation.**
 - Third, **war crimes** which are grave breaches of Geneva conventions in context of armed conflict and include, for instance, **use of child soldiers; killing or torture of persons such as civilians or prisoners of war; intentionally directing attacks against hospitals, historic monuments, or buildings dedicated to religion, education, art, science or charitable purposes.**
 - Finally, the fourth crime falling within the ICC's jurisdiction is the **crime of aggression.** It is the use of **armed force by a State against the sovereignty, integrity or independence of another State.** The definition of this crime was adopted through amending the Rome Statute at the first Review Conference of the Statute in Kampala, Uganda, in 2010.
- Article 8 of Rome Statute deals with war crimes.

- Article 8(2)(b)(ii) says war crimes include “intentionally directing attacks against civilian objects, that is, objects which are not military objectives” and
- Article 8(2)(b)(ix) mentions “intentionally directing attacks against buildings dedicated to religion, education, art, science or charitable purposes, historic monuments, hospitals and places where sick and wounded are collected, provided they are not military objectives”.
- 122 countries are States Parties to Rome Statute of International Criminal Court.
 - **United States is a signatory that has not ratified Statute.**
 - **India has neither signed nor ratified Statute.**
- The ICC is **intended to complement**, not to replace, national criminal systems; it prosecutes cases only when States do not are unwilling or unable to do so genuinely.



Rome Statute of the International Criminal Court

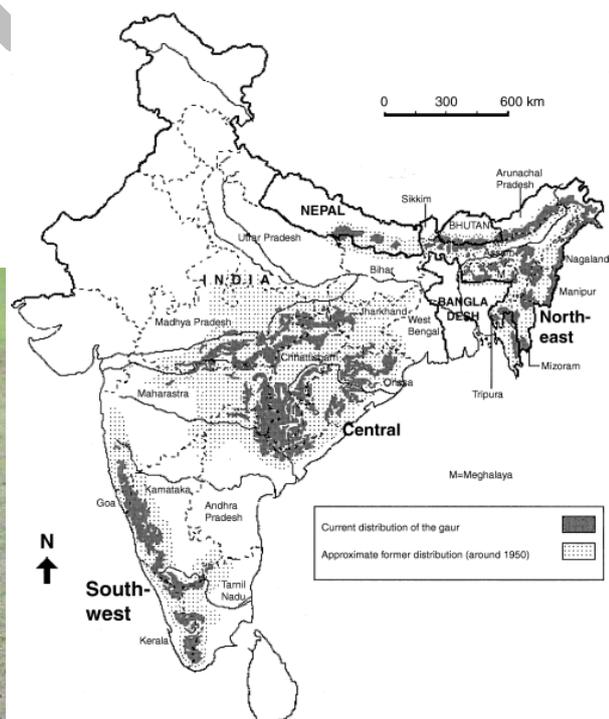


Parties and signatories of the Statute

- State party
- State party for which it has not entered into force
- Signatory that has not ratified
- Non-state party, non-signatory

TOPIC 5. INDIAN GAUR

- The 1st population estimation exercise of Indian gaur carried out in Nilgiris Forest Division in recent years, which was conducted in February 2020, has revealed that more than an estimated **2,000 Indian gaurs** inhabit entire division.
- Worryingly, exercise has also revealed that majority of animals in **“conflict-prone”** areas in division live perilously close to human habitations due to **habitat loss and fragmentation**, exacerbating probability of having problematic interactions with humans.
- According to statistics revealed by Forest Department, 794 gaurs were directly sighted over a 1-week period during exercise. **Direct sightings** were by Department staff and volunteers who were involved in exercise.
- it was estimated that there were more than 2,000 Indian gaurs across division, with an average of **eight individuals per square kilometre**.
- The Department officials said that decision to also estimate the population of Indian gaur, alongside other major fauna in division, especially around major towns of Coonoor, Udthagamandalam, Kotagiri and Kundah was **necessitated by an increase in number of problematic human-gaur interactions** in Nilgiris over last few years.
- It was noticed that a majority of gaurs seen around Kundah, Kotagiri, Coonoor and Kattabettu, where a majority of these interactions occurred, preferred to **inhabit tea estates and human settlements**, while the animals largely avoided forested areas.
 - easy availability of food in and around human settlements,
 - lack of threat from predators, and
 - spread of invasive flora into reserve forests.
- Although there were sizeable populations of gaurs in other areas, such as in Pykara and Naduvattam, interactions with humans were comparatively less due to native forests being largely free of invasive flora, and land-use patterns also remaining relatively stable, officials said, making it clear that increasing human pressures were leading to problems.
- **Challenges**
 - “Moreover, many of these ‘conflict-prone’ regions are witnessing **changing land-use patterns**, with what were tea estates being converted into resorts and buildings.
 - This also translates to **fences becoming more prominent** around these properties and severely limiting traditional pathways used by the gaur to move between habitats,”.
- Officials said that, on average, a total of **60 gaurs die each year** in the Nilgiris Forest Division, many due to accidents related to living close to human habitations.
- This is 1st population estimation exercise which has been conducted in division in recent years.
- “We will need to continue to conduct such periodic estimations to ascertain whether population of gaurs is increasing or if population is stable,”.



TOPIC 6. NAKU LA

- The skirmishes and stand-off between Indian and Chinese troops at Naku La in Sikkim last month, in an area of Line of Actual Control (LAC) that is considered settled, may be Beijing's way of attempting a new claim, highlighting historic **Sikkim-Tibet Convention of 1890** as proof of India's ownership of territory.
- According to Convention, boundary in area is based on watershed principles.
- Its Article 1 states, "The boundary of Sikkim and Tibet shall be crest of mountain range separating waters flowing into Sikkim Teesta and its affluents from waters flowing into Tibetan Mochu and northwards into other rivers of Tibet. ...follows above mentioned water-parting to point where it meets Nepal Territory."
- The Gazetteer of Sikkim in 1894, while describing physical features of Sikkim, also mentions boundary that runs along Naku la - Chorten Nyima La.
- Geographic alignment of features was so prominent that it could easily be identified and recognized. Even analyzing available Google images of the pass, location of Naku La could be discerned by anyone as watershed parting line in area was very prominent. "There exists no ambiguity with respect to location of the pass, since geographic realities cannot be altered,".
- "The clearly orchestrated actions on an otherwise dormant area masks a hidden agenda, which is far removed from Naku La," Chinese push at several points along the LAC and also the ongoing Chinese aggression in the South China Sea and Taiwan Straits.
- Diplomatic experts point out that China may also be opening up a front in Sikkim due to the ambiguous official position of the boundary.

Undemarcated boundary

- Although meetings between former Prime Minister Atal Bihari Vajpayee and Chinese Premier Wen Jiabao in 2003 and maps exchanged subsequently indicated that India recognised Tibetan Autonomous Region as a part of China and Beijing recognised Sikkim as a State of Indian Union boundary at Sikkim while undisputed remains undemarcated on the ground.
- In 2017, after Doklam stand-off near India-Bhutan-China trijunction, "there are still steps to be covered before the boundary is finalised."
- India accepted 1890 treaty as "basis for alignment", but treaty had only been "partially implemented on ground". "Certainly, segments India is talking about, Batang La segment, etc. was not there and there is nothing to show that was actually delineated or demarcated or agreed upon."



TOPIC 7. WASTEWATER OUTPUT

- After National Green Tribunal directed Indian Railways to get a No Objection Certificate (NOC) from CPCB under provisions of Water Act & Air Act, a clarification was sought since railway stations did not figure in classified list of industries requiring permission to operate.
- The CPCB issued a clarification stating that railway stations would be classified into red, orange and green based on
 - **quantity of wastewater generation and**
 - **disposal of untreated water into municipal drain systems.**
- While railway stations generating **wastewater equal to or more than 100 Kilo Litres per Day (KLD)** would be categorized as **RED**,
- those **greater than 10 KLD but less than 100 KLD** would come under the **ORANGE** category.
- Railway stations with **less than 10 KLD** wastewater generation would be branded **GREEN**.
- In a note to all Zonal Railways, Railway Board said it had become imminent to reduce waste water generation at railway stations and urged need to identify quantity of sewage/non-sewage waste water separately to plan installation of water recycling plants accordingly.
- Chairman, CPCB, by invoking powers under provisions of **Water (Prevention & Control of Pollution) Act, 1974**, had issued a direction to all State Pollution Control Boards (SPCBs) to categorize railway stations and send an action taken report.

WASTE WATER TREATMENT PROCESS

An overview of how waste water is cleaned and treated before returning to the water supply.

(Methods vary between countries depending on water standards)

36% of the World's population does not have adequate sanitation

Source - World Health Organisation



- 1** Waste water and sewage is pumped underground to the lifting station where it is chemically treated and sent for separation
- 2** The separation process filters out solids larger than 13mm. This waste is then transported to a refuse facility and buried
- 3** Primary settling basins allow heavier material to sink and be scraped away. The waste is then fermented for 30 days and used as fertiliser
- 4** Effluent is then pumped to the bio-reactors for 9 hours. Through a series of stages bacteria break down harmful matter and clean the water
- 5** Secondary Clarifiers gravity feed the water through and bacteria continues to clean the water to a drinkable level
- 6** The water is finally chemically treated with chlorine to ensure it is free from bacteria. Then it passes over a weir and into the water supply

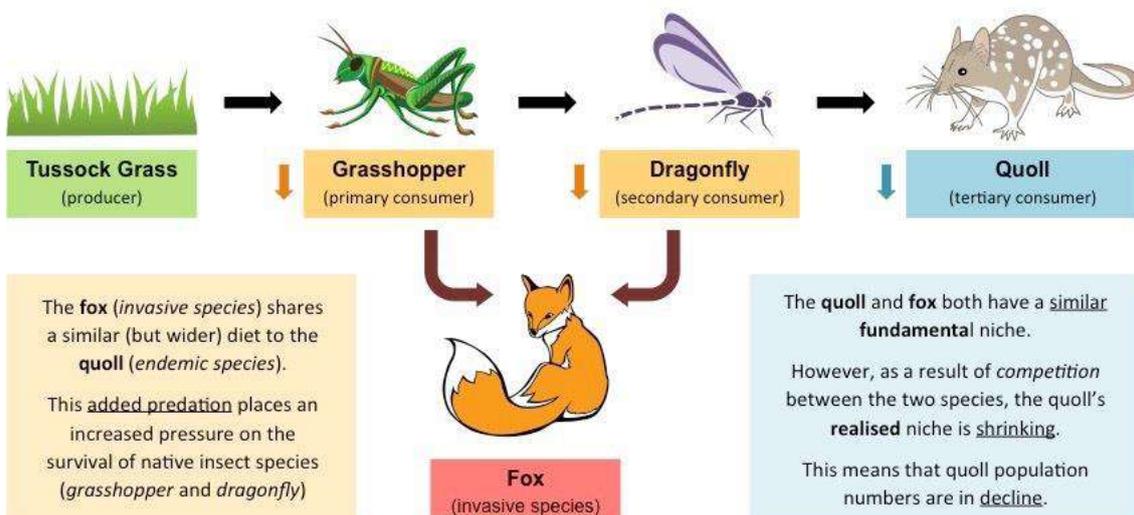
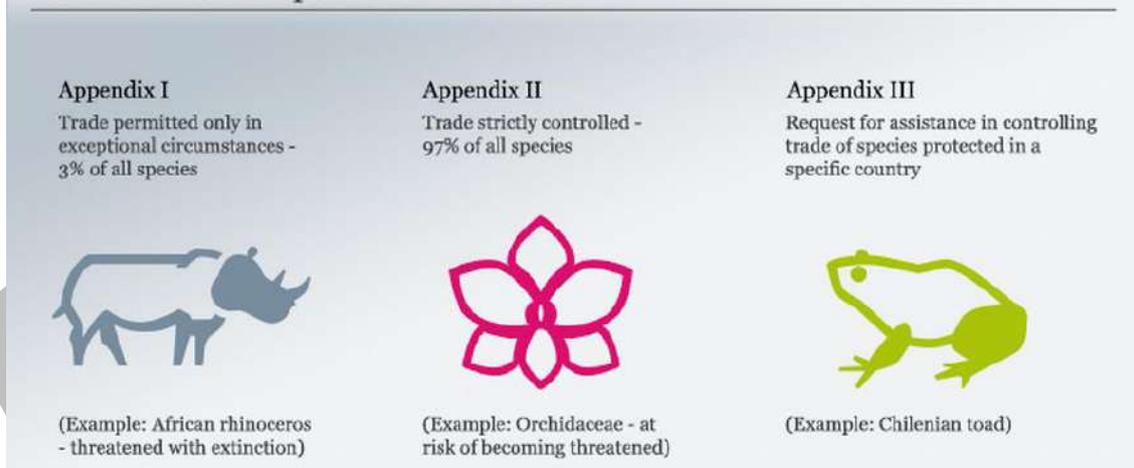
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TOPIC 8. BLUE AND GOLD MACAWS

- Ministry of Environment Forest and Climate Change (MOEFCC) has issued an advisory saying people **importing “exotic live species” will have to make a voluntary disclosure.**
- Reasons:**
 - The move comes as outbreak of COVID-19 has raised global concern about **illegal wildlife trade and zoonotic diseases.** “Considering significance of import and export of exotic live species, this Ministry is issuing the advisory to streamline the process”
- Definition:**
 - “EXOTIC LIVE SPECIES”** as animal or plant species moved from their original range (location) to a new one.
 - Several exotic species of birds, reptiles, small mammals, fishes and even some plants are imported.
 - “exotic live species” shall mean only “animals named under Appendices I, II and III of **Convention of International Trade in Endangered Species (CITES) of Wild Fauna and Flora**”.
 - Species covered by **Wildlife (Protection) Act of 1972** cannot be traded.
- Experts have welcomed the move and said it will create a process where all imports will be screened.
- As of now, imports are being made through Director General of Foreign Trade and State Forest departments are not kept in loop.
- For new “exotic live species”, importer should obtain a no-objection certificate from Chief Wildlife Warden (CWLW) of State.
- For existing species, stocks “shall be declared by owner/ holder (stock, as on 1 January 2020) to Chief Wildlife Warden (CWLW) of concerned State or UT”.

Classification of species under CITES



TOPIC 9. SKILL MAPPING

- The plight of inter-State worker returning home has loomed large over crisis caused by COVID-19, with Uttar Pradesh being one of first States **to undertake skill mapping and announce policies to try and assure employment to returning workers within State.**
- It had launched a skill mapping exercise of all returning workers to get an assessment of what employment can be provided in situ.
- Through affidavits placed before Supreme Court, it is now clear that more than 75% of all Shramik Special trains were taking these workers home to Uttar Pradesh and Bihar. Uttar Pradesh, according to State government's own undertaking, has received 26 lakhs of its workers back from where they had migrated for work.
- "Of these 26-lakh people, we have completed skill mapping exercise for 18 lakh,".
- According to the figures available,
 - **CONSTRUCTION WORKERS** comprised largest skill set with nearly 16 lakh people having been employed in that sector. This includes contract labour, those with skills regarding specific works like flooring, painting and carpentry. An additional 55,000 people have experience in furniture and fittings and interior decoration.
 - Over 10,000 people previously employed as **DRIVERS** have returned
 - 5,000 and more **INFORMATION TECHNOLOGY ELECTRONICS TECHNICIANS** [data operators and low level jobs]
 - 6,000 **HOME APPLIANCE REPAIRMEN.**
 - 2,000 **TECHNICIANS** related to automobile field have also returned home
 - 1,300 **BEAUTICIANS, PARAMEDICS, PHARMA ASSISTANTS, HANDICRAFT WORKMEN and CARPET WEAVERS.**
 - The effort is to conclude mapping fast and register them under **Kaamgaar Shramik Kalyan Aayog** set up for them and put in place some insurance policies as well.
- MSME Ministry has entered into 4 MoUs with industry associations like FICCI, Laghu Udyog Bandho, Indian Industry Association and NADRECO for providing jobs to 11 lakh skilled and semi skilled workers. The first step to that is the skill mapping exercise.



TOPIC 10. DIABETES

- At least 50 of 640 districts studied have high prevalence of diabetes, greater than one in 10 among women aged 35-49 years. **Tamil Nadu, Kerala, Andhra Pradesh and Odisha** have districts with highest prevalence.
- While Cuttack in Odisha has the highest prevalence of 20%, 14 districts in Tamil Nadu — the maximum among all States — have high prevalence, prompting the researchers to classify them as ‘hotspots’.
- In all, 254 districts have a “very high level” (greater than 10.7%) of diabetes burden, and 130 have a moderately high (8.7-10.6%) burden. Burden is higher in southern and eastern parts of country and lowest in central India.
- The researchers sourced data from National Family Health Survey-4 (2015-16) as it provides district-level health indicators for women. Demographic details of 2,35,056 women from 36 States / Union Territories were analyzed for gleaning disease spread and analyzing relationship among disease and socio-economic category, location, number of children, obesity and hypertension among others. This was also first NHS survey to collect blood glucose levels in men and women thus helping determine diabetes.

Factors at play

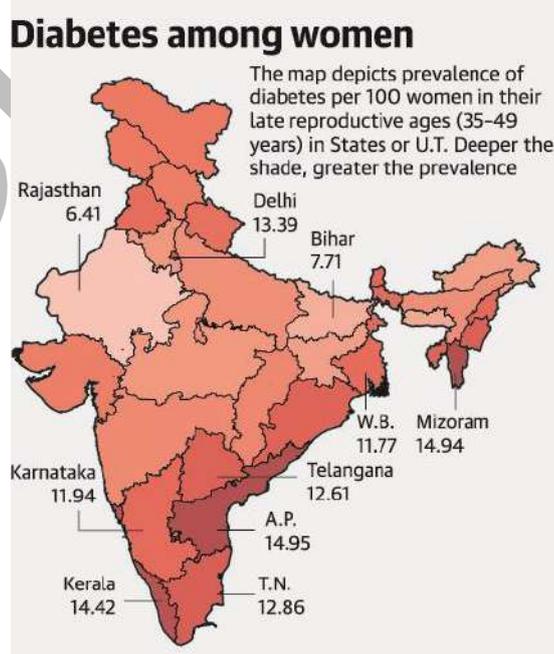
- Results portray that prevalence of diabetes among women in their late reproductive ages is highest **among those with two or fewer children ever born, who are educated, belonging to economically prosperous households, living in urban areas and hence enjoying changing lifestyle. increased access to high energy (refined and processed) food and development,”**.
- Previous studies of the incidence of diabetes in men and women in India have thrown up mixed results with some finding greater evidence of the disease in women, in North India, and others reporting men in South India as more susceptible. However, a **skewed gender ratio as well unequal access to medical care has led to the disease being under-reported in women.**

Mortality and women

- The study focused on women who were approaching menopause, which was also a period when the risk of obesity, hypertension rose as well as complications from late pregnancy.
- It also provided a greater perspective on why mortality from diabetes is higher among women.
- Knowing this will help design programmes and interventions to lower community-based prevalence of diabetes, especially among women in their late reproductive ages.
- Previous work had found that diabetes-related mortality is higher among women in India. Prevalence of diabetes among women in India didn’t substantially differ from that of men.

Rise of diabetes

- The number of people with diabetes in India increased from **26.0 million in 1990 to 65 million in 2016**.
- The prevalence of diabetes in adults aged 20 years or older in India increased from 5.5% in 1990 to 7.7% in 2016.
- The prevalence in 2016 was highest in Tamil Nadu and Kerala.
- Higher levels of diabetes in the southern and eastern parts of India as being linked to diets of “rice-meat-and-fish” and a higher intake of “sweets and snacks” that were rich in trans-fats.



TOPIC 11. GROSS VALUE ADDED

The story so far:

- The National Statistical Office (NSO), on May 29, released its provisional estimates of national income for financial year 2019-20. As per NSO, **real GDP (Gross Domestic Product) in full fiscal year was estimated to have expanded by 4.2% from a year earlier**, slowest pace of growth in 11 years.
- And GDP growth for January-March quarter was pegged at 3.1%. The release also detailed estimates of Gross Value Added, or GVA, at basic prices for four quarters of 2019 as well as comparable quarterly data for two preceding years.
- Interestingly, GVA numbers for first three quarters revealed significant revisions from what NSO had shared back in February, when it had announced estimates for third quarter.
- While initial estimates are routinely revised based on updated availability of information, extent of these revisions has come into focus since they point to a sharper and more widespread slowdown in economic activity over course of last financial year than had been previously revealed.

What is Gross Value Added (GVA)?

- In 2015, in wake of a comprehensive review of its approach to GDP measurement, India opted to make major changes to its compilation of national accounts and bring whole process into conformity with United Nations System of National Accounts (SNA) of 2008.
- As per SNA, GVA is defined as **value of output minus value of intermediate consumption and is a measure of contribution to GDP made by an individual producer, industry or sector.**
- At its simplest it gives rupee value of goods and services produced in the economy after deducting the cost of inputs and raw materials used. GVA can be described as the main entry on the income side of the nation's accounting balance sheet, and from an economics perspective represents the supply side.
- While India had been measuring GVA earlier, it had done so using 'factor cost' and GDP at 'factor cost' was main parameter for measuring country's overall economic output till new methodology was adopted.
- In new series, in which base year was shifted to 2011-12 from earlier 2004-05, GVA at basic prices became primary measure of output across economy's various sectors and when added to net taxes on products amounts to GDP.
- As part of data on GVA, NSO provides both quarterly and annual estimates of output — measured by gross value added — by economic activity. The sectoral classification provides data on eight broad categories that span gamut of goods produced and services provided in the economy.
 1. **Agriculture, Forestry and Fishing.**
 2. **Mining and Quarrying.**
 3. **Manufacturing.**
 4. **Electricity, Gas, Water Supply and other Utility Services.**
 5. **Construction.**
 6. **Trade, Hotels, Transport, Communication and Services related to Broadcasting.**
 7. **Financial, Real Estate and Professional Services.**
 8. **Public Administration, Defence and other Services.**

Why are the latest GVA numbers attracting attention?

- In February, NSO announced estimates of national income and expenditure for fiscal third quarter along with its second advance estimates of GDP for 2019-20. Those estimates had pegged year-on-year GVA growth rates in first three quarters at 5.4%, 4.8% and 4.5%, respectively.
- The February estimates also suggested that manufacturing, construction, electricity and utility services and the trade, hotels and transport (another services category) sectors apart, the other four sectors were faring at about the same level or better than the comparable year earlier periods.
- However, last month's estimates saw significant downward revisions in GVA data pertaining to 1st three quarters for 5 of 8 sectors, dragging down Q1, Q2 and Q3 GVA growth rates to 4.8%, 4.3% and 3.5%. The revisions, combined with a lacklustre performance in the fourth quarter, including a sharp

weakening in momentum at two of the largest services sectors ultimately lowered the overall annual GVA growth estimate for 2019-20 by as much as 1 % point to 3.9%, from 4.9% forecast in February.

- A closer look at some of the sectoral revisions point to a deeper weakness in the service sectors than had been previously factored in. Take Trade, Hotels, Transport, Communications and Services related to Broadcasting. As a sector it contributes almost 20% to GVA and is the largest GVA component after the other major services category, Financial, Real Estate and Professional Services. While in February Q1, Q2 and Q3 growth for the sector was estimated at 5.7%, 5.8% and 5.9%, respectively, in the latest estimates they have been cut to 3.5%, 4.1% and 4.3%, respectively.
- Similarly, the growth estimates for the largest services sector, which contributes almost one-fourth of the overall GVA, too have been reduced sharply. Q1, Q2 and Q3 growth has been cut from 6.9%, 7.1% and 7.3%, respectively to 6%, 6% and 3.3%, respectively.
- The revisions, however, show two other key sectors in a more positive light. Agriculture's growth for the first three quarters has been marginally increased while Public Administration too as a category has had its numbers boosted for the second and third quarters. The latter sector's Q1, Q2 and Q3 growth have been revised from 8.7%, 10.1% and 9.7%, respectively, to 7.7%, 10.9% and 10.9%.

How relevant is the GVA data given that headline growth always refers to GDP?

- The GVA data is crucial to understand how the various sectors of the real economy are performing. The output or domestic product is essentially a measure of GVA combined with net taxes. While GDP can be and is also computed as the sum total of the various expenditures incurred in the economy including private consumption spending, government consumption spending and gross fixed capital formation or investment spending, these reflect essentially on the demand conditions in the economy.
- From a policymaker's perspective it is therefore vital to have the GVA data to be able to make policy interventions, where needed. Also, from a global data standards and uniformity perspective, GVA is an integral and necessary parameter in measuring a nation's economic performance, and any country which seeks to attract capital and investment from overseas does need to conform to the global best practices in national income accounting.

What are the drawbacks in using GVA to measure economic growth?

- As with all economic statistics, the accuracy of GVA as a measure of overall national output is heavily dependent on the sourcing of data and the fidelity of the various data sources in capturing the vast labyrinth of activities that constitute a nation's economic life. To that extent, GVA is as susceptible to vulnerabilities from the use of inappropriate or flawed methodologies as any other measure.
- In a June 2019 research paper titled 'India's GDP Mis-estimation: Likelihood, Magnitudes, Mechanisms, and Implications,' former Chief Economic Adviser Arvind Subramanian of Harvard University and the Peterson Institute for International Economics posited that the change in methodology and data sources when India switched its base year to 2011-12 had led to a significant overestimation of growth.
- Specifically, he argued that the value-based approach instead of the earlier volume based tack in GVA estimation had affected the measurement of the formal manufacturing sector and thus distorted the outcome. The paper triggered much debate and prompted the Ministry of Statistics & Programme Implementation to assert in a response that the Ministry's GDP estimates were based on "accepted procedures, methodologies and available data and objectively measure the contribution of various sectors in the economy".

TOPIC 12. GOOGLE

What has the Internet search company been accused of? Has it been misrepresenting data practices?

The story so far:

- ***A proposed class action lawsuit filed against Google on Tuesday alleges that the Internet search giant tracks and collects browsing data “no matter what” steps users take to safeguard their privacy.*** The plaintiffs, Chasom Brown, Maria Nguyen and William Byatt, have filed the lawsuit on behalf of “millions of individuals” (Google users in the U.S.) at U.S. District Court for Northern District of California. They allege Google has violated the federal wiretap law as well as a California privacy law.

What, according to the plaintiffs, is wrong with what Google is doing?

- The plaintiffs allege that Google tracks, collects, and identifies the browsing data of even those users who browse the Web privately via, say, the Incognito mode. Google, they claim, “accomplishes its surreptitious tracking” through near ubiquitous tools such as Google Analytics, Google Ad Manager, and other plug-ins. Google Analytics and other tools are implemented only when their code is embedded into the code of existing websites. The petitioners reckon “over 70% of online websites and publishers on the internet” employ Google Analytics.
- The point of Brown and others is, when a user accesses website that employ these Google tools, Google automatically gets information about the user’s IP address, URL of the site, and many, many more details. “Google designed its Analytics code such that when it is run, Google causes the user’s browser to send his or her personal information to Google and its servers in California,” the petitioners say in the lawsuit. And, they say, it doesn’t matter if a user is on private viewing mode.
- That’s not all. They also allege that Google has been misrepresenting its data collection practices.

What does the lawsuit say about the misrepresentation?

- The petitioners charge Google with giving false assurances about the ability of users to control what they share with the search engine. They say that users not only don’t know that Google is collecting information even when they are in a private view mode but also have no means to avoid its scrutiny.

How, according to petitioners, do actions of Google violate provisions of Federal Wiretap Act and privacy laws of California?

- The Federal Wiretap Act disallows any intentional interception of any wire, oral, or electronic communication. The petitioners have invoked this Act, saying the following: “Google’s actions in intercepting and tracking user communications while they were browsing the internet using a browser while in ‘private browsing mode’ was intentional. On information and belief, Google is aware that it is intercepting communications in these circumstances and has taken no remedial action.”
- They have also contended that the acts of Google violate the California Invasion of Privacy Act, which prohibits intentional tapping of communication. Further, they say, the right to privacy has also been violated.

What has Google’s response been?

- Reuters has reported Google spokesperson Jose Castaneda as saying that the company will defend itself against the claims. He has been cited as saying, “As we clearly state each time you open a new incognito tab, websites might be able to collect information about your browsing activity.”
- The petitioners also use the example of the recent Arizona v. Google case to bolster their arguments.

What is the case about and how is it relevant?

- This case against Google was filed by Arizona Attorney General Mark Brnovich in May. The allegation was one of privacy violation by Google, the specific charge being that the company was tracking user location even when the user had turned off location tracking. Brnovich had tweeted on May 28: “Today we filed a consumer fraud lawsuit against Google for deceptive and unfair practices used to obtain users’ location data, which Google then exploits for its lucrative advertising business.” Petitioners Brown and others referred to this case while elaborating on the “passive data collection practices employed by Android, Google applications (e.g., Chrome and Maps), Google Home, and other Google applications and services”

Has Google been sued in the past for wiretapping law violations?

- Yes. One of the long-running cases ended last year when Google agreed to a \$13 million settlement. The allegation was its “Street View mapping project captured data from private Wi-Fi networks,” according to a Bloomberg report. Later, media reports suggested that some nine States were against this settlement as it contributed to massive privacy violation. In 2016, it reportedly settled a case where it was accused of “surreptitiously scanning Gmail messages for advertising revenues”. It was reported then that it had agreed to stop the practice. Last year, it was fighting a similar case, as per reports.

- The lawsuit claims that Google tracks and collects consumer browsing history and other web browsing activity data “no matter what” safeguards consumers may use.
- On Tuesday (June 2), Google was sued in a proposed class action suit in the US. The lawsuit alleges that the company tracks people even when they are browsing the internet using the “private mode”. The class action suit demands \$5 billion from Google’s parent firm Alphabet for violating the Federal Wiretap law and the invasion of privacy Act.
- It also claims that Google’s interception of user data is “intentional” and “unlawful”. Jose Castaneda, a Google spokesman, told Reuters that the company will defend itself “vigorously” against the claims. “As we clearly state each time you open a new incognito tab, websites might be able to collect information about your browsing activity,” Castaneda was quoted as saying in the report.
- Last month, the company was sued by Arizona’s Attorney General Mark Brnovich, who alleged that Google violated user privacy by tracking the user location even when it had been turned off. On May 28, Brnovich tweeted, “Today we filed a consumer fraud lawsuit against Google for deceptive and unfair practices used to obtain users’ location data, which Google then exploits for its lucrative advertising business.”

What is the lawsuit?

- The lawsuit, which has been filed by Chasom Brown, Maria Nguyen and William Byatt individually and on behalf of all those Google subscribers whose internet was tracked from June 1, 2016 onward, claims that Google tracks and collects consumer browsing history and other web browsing activity data “no matter what” safeguards consumers may use.
- It further says that Google accomplished this using means such as Google Analytics, Google Ad Manager and other applications and website plug-ins on mobile devices and websites. “When an internet user visits a webpage or opens an app that uses such services (over 70% of all online publishers use such a service), Google receives detailed, personal information such as the user’s IP address (which may provide geographic information), what the user is viewing, what the user last viewed, and details about the user’s hardware,” the lawsuit claims.
- Significantly, it says that Google takes this data regardless of a person clicking on a Google-supported advertisement.
- The communications intercepted by Google include “contents” of electronic communications in the form of detailed URL requests, webpage browsing histories and search queries made by plaintiffs, it says. The interception also enables Google to know about who an individual’s friends are, what their hobbies are, what a person may like to eat, watch and shop etc.
- “This means that billions of times a day, Google causes computers around the world to report the real-time internet communications of hundreds of millions of people to Google.”
- Moreover, the plaintiffs have charged Google with giving users the false impression that they can prevent Google from tracking their browsing history and collecting their personal data online.

What is the Federal Wiretap Act?

- The Federal Wiretap Act prohibits the intentional interception of the contents of any wire, oral or electronic communication through the use of a safe device. “Google’s actions in intercepting and tracking user communications while they were browsing the internet using a browser while in “private browsing mode” was intentional. On information and belief, Google is aware that it is intercepting communications in these circumstances and has taken no remedial action,” the lawsuit says.

What is the California Invasion of Privacy Act?

- The Act says the following, “The Legislature hereby declares that advances in science and technology have led to the development of new devices and techniques for the purpose of eavesdropping upon private communications and that the invasion of privacy resulting from the continual and increasing use of such devices and techniques has created a serious threat to the free exercise of personal liberties and cannot be tolerated in a free and civilized society”.
- The plaintiffs maintain that Google’s intentional interception of user information violates this law too.

TOPIC 13. COVID-19 TERMINOLOGY

What are some of the key terms being used to describe the novel coronavirus outbreak?

The story so far:

- Everywhere you go, it has become impossible to avoid conversations about COVID-19, and most conversations are peppered with scientific terms that have now become commonplace. Here is a short glossary of terms that you might hear/use regularly but may not understand entirely.
- **COVID-19** — A term coined by the World Health Organization (WHO) to denote the disease that has led to a pandemic. On February 11, 2020, WHO announced a name for the mysterious disease originating in China, caused by a new coronavirus. It called it coronavirus disease 2019, abbreviated as COVID-19, where CO stands for corona, VI for virus, and D for disease, while the numerals – 19 refer to the year in which the first case was detected. WHO claimed it had consciously avoided naming the disease after the place of origin, to avoid stigmatizing that country/area. The International Committee on Taxonomy of Viruses (ICTV) announced “severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)” as the name of the new virus, also on February 11, 2020. This name was chosen because the virus is genetically related to the coronavirus responsible for the Severe Acute Respiratory Syndrome (SARS) outbreak of 2003. While related, the two viruses are different. WHO and the ICTV were in communication about the naming of both the virus and the disease.
- **Epidemic** — When the incidence of a disease rises above the expected level in a particular community or geographic area, it is called an epidemic. The outbreak started in Wuhan city in Hubei province in China, with what seemed then as a cluster of pneumonia-like cases.
- **Pandemic** — A global epidemic. When the epidemic spreads over several countries or continents, it is termed a pandemic. On January 30, WHO announced that COVID-19 was a Public Health Emergency of International Concern. On March 11, WHO decided to announce COVID-19 as a pandemic.
- **R0** — R-Naught is the basic reproduction number. This is the number of new infections caused by one infected individual in an entirely susceptible population. It helps determine whether an epidemic can occur, the rate of growth of the epidemic, the size of the epidemic and the level of effort needed to control the infection. If R0 is 2, then one individual will infect two others. As of end May, India’s R0 value was in the range of 1.22.
- **Co-morbidities** — Several health conditions including uncontrolled diabetes and hypertension, cancer, morbid obesity, lung diseases, compromised immune systems put patients at greater risk for contracting the infection, and also have poor clinical outcomes. Special attention to prevent the disease and prevent mortality in these groups is the concern of health managers.
- **Transmission** — The method by which the disease spreads. In COVID-19 it is through respiratory droplets, expelled while talking, laughing, coughing and sneezing. This makes mask wearing and physical distancing the main tools for protection against the virus. Washing hands with soap and water is an effective way to kill the virus.
- **Community transmission** — When you can no longer tell how someone contracted the disease, or who the source of infection was. As numbers climb, this tracing becomes next to impossible.
- **Contact tracing** — Identifying and monitoring people who may have come into contact with an infectious person. In the case of COVID-19, monitoring usually involves self-quarantine as an effort to control the spread of disease.
- **Super spreader** — Some individuals seem to have the capacity to cause more infections in a disproportionately large number of people, than others. The current pandemic has recorded some super spreaders who have had a huge role in the transmission.
- **Positivity rate** — The percentage of people who test positive among all those who are tested. If positivity rate is high, it is possible that only high risk groups are being tested. A low positivity rate can also indicate that not enough testing is being done.

- **Infection fatality rate** — It is the number of deaths occurring in all infected people in a particular population. This includes those who might have the COVID-19 infection but have not been tested for it. Given that number of tests is not high, experts have clarified that this is not a useful metric to have in this pandemic.
- **Case fatality rate** — This is number of deaths occurring among confirmed cases of COVID-19. Since these two figures are available with a certain amount of reliability, it is actually CFR that is being referred to when there is a loose reference to fatality rate.
- **Severe Acute Respiratory Infection (SARI)** — A respiratory disease also caused by a coronavirus, and spread through the same transmission method, i.e. respiratory droplets. The symptoms (fever, cough, body ache, difficulty in breathing) are also similar. The government has begun surveillance of SARI patients as also patients with Influenza-like Illness (ILI) admitted in hospitals too.
- **Cytokine storm** — An immune reaction triggered by the body to fight an infection is known as a cytokine storm when it turns severe. The body releases too many cytokines, proteins that are involved in immunomodulation, into the blood too quickly. While normally they regulate immune responses, in this case they cause harm and can even cause death. Experts have noticed a violent cytokine storm in several individuals who are critical with COVID infection. These cytokines dilate blood vessels, increase the temperature and heartbeat, besides throwing bloodclots in the system, and suppressing oxygen utilisation. If the cytokine flow is high and continues without cessation, the body's own immune response will lead to hypoxia, insufficient oxygen to the body, multi-organ failure and death. Experts say it is not the virus that kills; rather, the cytokine storm.
- **RT- PCR (Reverse Transcription-Polymerase Chain Reaction)** — It is the primary test to detect COVID-19 infection across the globe. It is a sensitive test that uses swab samples drawn from the nasal/oral cavity to test for the presence of viral RNA (ribonucleic acid). It has got better sensitivity (ability to correctly identify those with the disease) and specificity (ability to correctly identify those without the disease) rates in current diagnostic tests for COVID.
- **Antibody tests** — These tests check your blood by looking for antibodies, and that just means you have had a past infection of SARS-CoV-2. Antibodies are proteins that help fight off infections, and are specific to every disease, granting immunity against getting that particular disease again. An antibody test, with poor specificity, is not believed to be effective in detecting new infections. States have been asked to commence testing seroprevalence in community, using antibody tests, that are blood tests.
- **Convalescent plasma therapy** — Researchers are examining the efficacy of using convalescent plasma, that is, using neutralizing antibodies from the blood of people who have recovered from the COVID-19 infection to treat patients with COVID-19.
- **Hydroxychloroquine (HCQ)** — An antimalarial oral drug that is being repurposed for treatment in COVID-19. It has also been used successfully in the treatment of some auto immune conditions. Its value in COVID-19 has not been resolved entirely.
- **Flattening curve** — Reducing number of new COVID-19 cases, day on day. The idea of flattening the curve is to ensure that the health infrastructure is not overwhelmed by a large number of cases.
- **Herd immunity** — This is also known as community immunity and constitutes the reduction in risk of infection within a population, often because of previous exposure to the virus or vaccination.
- **PPE — Personal protective equipment**, or PPE, is specialized clothing and equipment used as a safeguard against health hazards including exposure to the disease.



TOPIC 14. POACHING

- A recent report by TRAFFIC, a leading wildlife trade monitoring network, has recorded a significant increase in poaching in India during the over two-month lockdown period.
- Indian wildlife amidst the COVID-19 crisis: An analysis of status of poaching and illegal wildlife trade, released earlier this week, points out that reports of poaching for consumption and local trade have more than doubled during the lockdown. It, however, mentions that there was no evidence of stockpiling of wildlife products for future trade.

Six-week period

- The researchers analysed media reports of poaching incidents in a six-week period before lockdown (February 10 to March 22) with those from six weeks during the lockdown (March 23 to May 3).
- Based on this, the report said: **“Reported poaching incidences rose from 35 to 88.”**
- It remains unknown how reporting rates in the media have changed because of the lockdown.
- The biggest increase in reported poaching was related to ungulates, where the percentage jumped from 22% of total reported cases during pre-lockdown to 44%, during the lockdown period.
- “Since these species are targeted mainly for meat (for self-consumption or for local trade), the increase is presumably due to those poaching for self-consumption or those who are trying to compensate their loss of income by making quick money through poaching,” the report stated.
- The second group of animals where there was a marked increase was ‘small mammals’, including hares, porcupines, pangolins, giant squirrels, civets, monkeys and smaller wild cats. Cases against this group rose from 17% to 25%.
- Interestingly, there was a slight decrease in the incidence of bird-related seizures, which dropped from 14% to 7%. There was less reporting of poaching and illegal trade in tortoises and freshwater turtles, with almost no seizures of these species during the period.
- Even though there are reports about pangolins being linked to the COVID-19 crisis, the report states that the animal was targeted in various parts of the country. “Live pangolins Manis spp. and their scales were seized from poachers in Uttarakhand, Karnataka and Odisha,” the study noted.
- Saket Badola, head of TRAFFIC’s India office and author of the report, said more than doubling of reported poaching cases, mainly of ungulates and small wild animals for meat, is doubtless placing additional burdens on wildlife law enforcement agencies.
- “Therefore, it is imperative that these agencies are supported adequately and in a timely manner so they can control the situation” noted Mr. Badola.

More arrests

- The report also pointed out that 222 persons were arrested for poaching-related cases during the lockdown as compared to 85 suspects during the pre-lockdown phase.
- The outcome of this study indicates that “despite efforts by law enforcement agencies, wild animal populations in India are being subjected to additional threats during the lockdown period”.



TOPIC 15. UNSC SEAT

- India will highlight **international terrorism, United Nations reforms and Security Council expansion, streamlining the world body's peacekeeping operations and technology initiatives** during its upcoming tenure as a non-permanent member of United Nations Security Council (UNSC) in 2021-22.
- "The normal process of international governance has been under increasing strain as frictions have increased. Traditional and non-traditional security challenges continue to grow unchecked. Terrorism is the most egregious of such examples,"
- "Unreformed and under-representative" global institutions and the COVID-19 pandemic and its economic impact would increase challenges for the UNSC.
- "India's overall objective during this tenure in the UN Security Council will be the achievement of **N.O.R.M.S: New Orientation for a Reformed Multilateral System,**"
- This will be 8th time India will occupy a non-permanent UNSC seat, with its last stint in **2011-2012**.

Guaranteed place

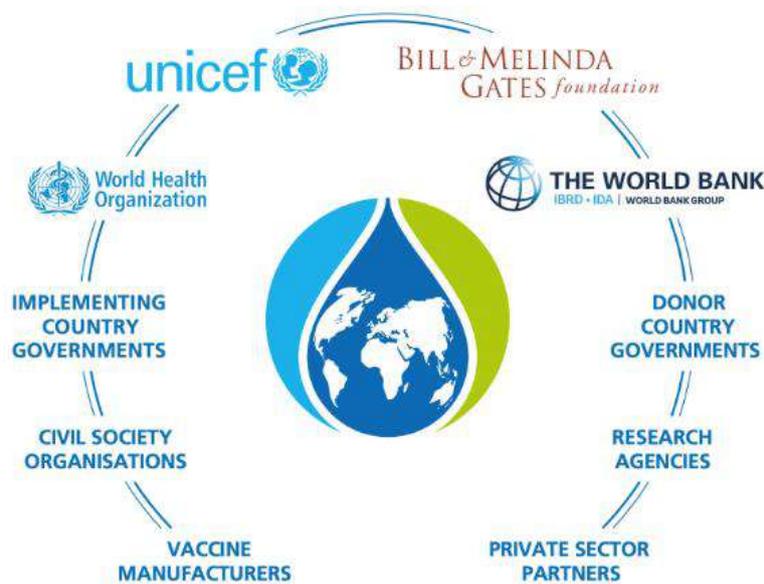
- India is guaranteed a place in UNSC as it is the sole candidate for Asia-Pacific but needs two-thirds of the 193-member General Assembly to vote in its favour in a secret ballot scheduled for June 17 in New York.
- Mexico is also expected to be elected unopposed for the Latin American group but there will be a battle for 2 seats of the West European and Others Group (WEOG) between Canada, Ireland and Norway, and for African seat between Kenya and Djibouti.
- While India is expected to sail through with the 129 votes required for the seat, the government is setting its sights on much higher numbers than that ahead of the election. In 2010, when India stood for the UNSC seat of 2011-2012, it won 187 of the 190 votes polled.
- The government launched its plan for the UNSC seat as far back as 2013, with a keen eye on 2021, year that will mark its 75th year of Independence.
- "We were asked to identify an uncontested spot, which was a problem as the first such slot would only come available in 2026.
- To our good fortune, Islamic Republic of Afghanistan agreed in a gesture to our friendship to step aside for 2021-22 seat. They cleared decision in their Cabinet and then we wrote jointly to General Assembly.
- The next big challenge was to pursue Asia-Pacific grouping nomination without any last minute contenders being propped up against India.

Diplomatic talks

- "While diplomacy between capitals certainly helps, the vote had to be tied down by negotiations on the ground," said a diplomat, explaining how India was able to win a unanimous endorsement from the 55-nation grouping that included both China and Pakistan, in June 2019.
- However, given rising tensions in relations with both those countries since then, as well as criticism from countries such as Turkey and Malaysia and other groupings like the OIC (Organization of Islamic Cooperation) over government's decision on Article 370 last August as well as the Citizenship Amendment Act, challenge to win the maximum votes at General Assembly this time is going to be more uphill than in the past.

TOPIC 16. VACCINE PROGRAMME

- Governments around the world on Thursday pledged \$8.8 billion for **global vaccines alliance - GAVI** to help immunization programmes disrupted by coronavirus, prompting calls for global cooperation to ensure a potential COVID-19 vaccine is available to all. The meeting beat a target to raise \$7.4 billion to provide vaccines at a much-reduced cost to 300 million children worldwide.
- More than 50 countries took part as well as individuals such as billionaire philanthropist Bill Gates, whose foundation pledged \$1.6 billion.
- GAVI also launched a new initiative to **purchase potential COVID-19 vaccines, scale-up production and support delivery to developing nations**, which raised \$567 million in seed money.
- Together we rise to fulfil greatest shared endeavor of our lifetimes triumph of humanity over disease.
- Scientists are racing to develop and test a coronavirus vaccine and United Nations Secretary General Antonio Guterres said it must be available to everyone.



TOPIC 16. LOCKDOWN HIT WOMEN'S JOBS MOST

- A clutch of early studies on the impact of the lockdown on employment is showing that women's employment could be particularly badly hit. Given India's record low female workforce participation rates, growing child-care demands, and now a looming recession, researchers fear that women could be increasingly shut out of the productive economy.
- To estimate the impact of the lockdown on employment, Ashwini Deshpande, professor of economics at Ashoka University, looked at national-level panel data from Centre for Monitoring Indian Economy (CMIE)'s Consumer Pyramids Household Survey (CPHS) database for a discussion paper published on the University's website.
- CMIE's database covers 170,000 households, speaking to each household three times a year, and surveying around 11,000 households per week. In the absence of official data on employment since 2017-18, this was the only available national-level source, Deshpande said.
- The CMIE data showed that job losses in April in the immediate aftermath of the lockdown were significant. Employment in April was just 70% of the monthly average between March 2019 and March 2020, Deshpande found. Far more men are in the paid workforce in India than women, and women's participation in the paid labour force has been in steady decline.
- As a result, the absolute number of men who reported having lost employment in April as compared to the average of the preceding year was much larger than the number of women who reported losing their jobs. Over 100 million men lost jobs as against 17 million women.
- But in percentage terms, the number of men who reported themselves as employed dropped by 29% in April as compared to the monthly average for March 2019 to March 2020, while for women the change was much greater at 39%. This implies that even from an already low base, four out of every 10 women who were working during the last year lost their jobs during the lockdown (**See chart 1**).
- Rural women were hit the hardest of all, for reasons that are not yet clear, Deshpande says. In rural India, the biggest relative decline in employment was among scheduled castes (**See chart 2**).
- Other Indian studies have found a similar disproportionate impact on women. In a survey of 4,000 people across 12 states, researchers at the Azim Premji University found that two-thirds (67%) of the workers they surveyed reported having lost their employment. However the sample was not random, having been obtained through civil society organizations, and had more women than men, while women make up less than 20% of the paid workforce in India.
- In their sample, urban India was more severely affected with 80% of their urban sample reporting employment losses as against 57% of their rural sample. Across states, the share of women reporting job losses was greater than that of men, they found (**See chart 3**).
- The key question will be whether these were temporary losses caused by the disruption due to the lockdown, or whether the looming recession means that these jobs will not return just yet. CMIE's data for May shows that roughly 21 million jobs were added, although the unemployment rate remained high at 23.5%.
- Whether more jobs returned to men or women is something we will not know until September, says Deshpande.
- Given the increased burden of childcare in the coming months as most schools remain closed, women could see a longer impact, Deshpande warns. In a study of 176 female workers in informal sectors in Delhi, Shiny Chakraborty, a research analyst at the Institute of Social Studies Trust found that a majority of women reported a loss in income. At the same time, 66% of the respondents reported an increase in unpaid work at home and 36% reported increased demands of child and elder care. Only a quarter reported any help from their spouses in household chores.
- The other concern is that even when there is work, women and Dalits might have to choose between putting themselves in harm's way and retaining their jobs, Deshpande says. "While women and Dalits have suffered disproportionately more job losses; risky, hazardous and stigmatized jobs are exclusively

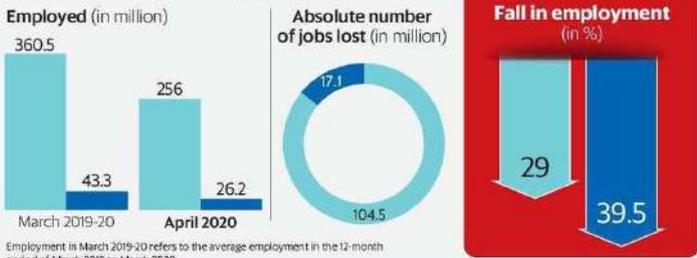
their preserve,” wrote Deshpande in her discussion paper. “All frontline health workers are women; manual scavengers are exclusively Dalit.

- Thus, for several women and Dalits, the choice seems to be between unemployment and jobs that put them at risk of disease and infection and make them targets of vicious stigma.”

MINT GRAPHITI

Chart 1
More men lost jobs in April, but the impact was proportionately greater on women

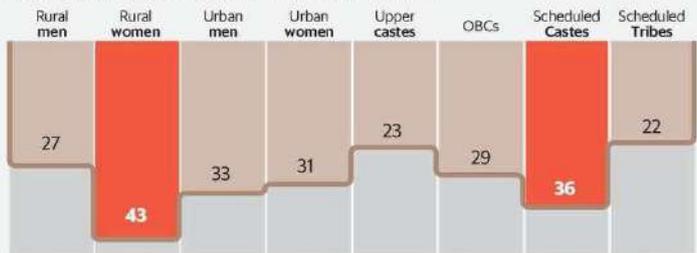
Decline in employment in the first full month of lockdown in India



Employment in March 2019-20 refers to the average employment in the 12-month period of March 2019 to March 2020.

Chart 2
Women and Dalits suffered the greatest decline in employment in April

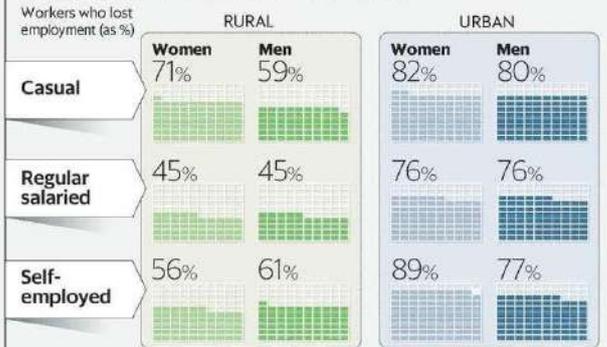
Decline in employment in the first full month of lockdown in India (in %)



The decline in employment refers to the reduction (in %) in the number of those reporting as employed in April 2020, as compared to the same during the preceding year (March 2019 to March 2020) on average.
Source: Ashwini Deshpande's calculations, based on CMIE data



Chart 3
In a select sample of workers, women were more likely than men to have lost their livelihoods



Sample used in the survey is purposive and not representative, data unweighted. Employment loss is as of May 2020, relative to February 2020. Source: Azim Premji University COVID19 Livelihoods Survey

TOPIC 17. APPROACHING FINANCIAL TRAIN WRECK

- As India's already weak economy takes a body blow from covid-19, all eyes are on our financial services ecosystem —banks, non-banking financial companies (NBFCs) and debt capital markets.
- For a while now, there have been clear symptoms indicating that all is not well with this ecosystem. There has been a trust deficit. Despite all the liquidity in the system, it has been unable to finance India's growth aspirations. Moreover, we have avoided a full report and diagnosis, and dragged our feet on treating the core issues. Perhaps with the best of intentions, we have not acknowledged the full extent of our financial sector's non-performing assets (NPAs) for close to a decade now.
- Under this collective wilful blindness, India has kicked the can down the road on resolving chronically stressed sectors such as real estate, power, and micro, small and medium enterprises (MSME). The country has dragged its feet on much-needed reforms of banking, governance and markets. Finally, India has lagged behind in enabling ease of investments, which has constricted credit growth as well as job and output creation.
- That said, in every challenge lies an opportunity. It is never too late to acknowledge the truth and act.
- Reliable estimates of possible NPAs post covid-19 could be an invaluable input in designing any economic relief and recovery package. Over the medium term, a credible financial sector health report can help us diagnose and treat the core issues that afflict our real economy and help us achieve our immense economic potential.

Banking & NBFCs

- To be fair ever since RBI launched Asset Quality Review (AQR) of banks in 2015 banking NPA disclosures have improved significantly. Reported gross banking NPAs rose from 4.5% of advances in March 2015 to 11.6% of advances in March 2018, before declining to 9.3% of advances in September 2019.
- Even so, banking NPA recognition remains incomplete—even before covid-19. For a while now, RBI has allowed forbearance (an agreement between lender and borrower to temporarily suspend debt payments) against NPA recognition for some of the over ₹8 trillion of MSME, MUDRA and commercial real estate banking loans. Anecdotal reports suggest there could be significant stresses lurking there, and the true banking NPAs could already be over 11% of advances.
- Likewise, while provisioning against NPAs has significantly improved over time, it remains incomplete. A cursory glance reveals that the extent of any particular bank's loan loss provision has largely been determined by the capital available to absorb them, rather than by any objective assessment of the recoverable value from the NPAs.
- There is even more trust deficit around NBFC NPAs. While RBI has strengthened reviews of NBFCs in recent times, unlike banks, they have not been subject to a rigorous, formal AQR. Officially, NBFC gross NPAs were at 6.3% of advances as of September 2019—lower than that of banks. This is simply not credible. A trust deficit is any financial ecosystem's worst nightmare. It allows speculation and fear to take over.
- Applying the banking sectoral NPA percentages to NBFC advances suggest that the actual gross NBFC NPA could already be as high as 11.5% of advances as of September 2019 (**chart 1**). In fact, TransUnion CIBIL reports suggest that NBFC delinquency in sectors such as auto, housing, loans against property, and personal loans are much higher than industry standards —so the 11.5% figure could actually be charitable to NBFCs.
- Taking this into account, the true bank and NBFC NPAs could already be between 11% to 12% of advances as of September 2019, rather than the 8.7% suggested by official numbers. Concomitantly, the provisioning shortfall would be even higher.

COVID-19 Impact

- Even assuming a rapid recovery from here, our FY21 GDP could contract by 5% to 6%. There is considerable economic distress among both households and businesses. All this will reflect in sharply higher financial sector NPAs.

- RBI has rightly stepped in to provide temporary moratorium and forbearance relief to the ecosystem. After all, many businesses will recover as the economy recovers, and much of the NPA numbers in the interim could just be unhelpful noise. Thanks to this forbearance, official financial sector NPAs will show no additional stress over the next quarter.
- But will all businesses and households recover? In the absence of any further economic packages, it appears that the true, durable NPA will rise sharply through covid-19. While considerable uncertainty makes any estimate hazardous, here's a scenario for banking and NBFC NPAs put together by the Observatory Group (**chart 2**).
- This scenario estimates that on the back of significant additional stresses in loans to MSME, industry, transport operators, tourism, hospitality, real estate, and unsecured retail among other sectors, collective bank and NBFC gross NPA could rise as high as 19.5% of advances.

THE HEALTH CHECK-UP

- NPAs—both actual as well as scenarios —can be an accurate pointer to the health of our economy, and importantly, help determine our economic policy imperatives.
- Banks and NBFCs should have a sector-wise estimate of how NPAs could pan out post covid-19. This should be an invaluable metric for policy makers to help determine the extent and sectoral focus of any covid-19 relief and recovery package.
- If the bottom up NPA projections are indeed as dire as chart 2 indicates, that makes a case for a stronger set of pre-emptive relief measures, to be weighed against the fiscal space available. Sustained economic hardship and NPAs are not inevitable. They can be addressed by policy initiatives. From a more medium-term perspective, NPAs also indicate the policy steps needed for both the financial sector as well as the broader economy.
- Accurate data might tell us that our financial sector is near comatose and battling a tumour. Our ultimate objective is not just to keep ecosystem alive. We need the sector to eventually support our considerable growth potential with strong credit growth. In other words, our financial sector needs to run a marathon. This acknowledgement will goad us into taking up difficult but inevitable course of treatment.
- First, much of the financial sector is currently agonizing over the NPA tumour now, rather than considering any fresh business. While the Insolvency and Bankruptcy Code (IBC) is an excellent reform, no bankruptcy framework is geared to handling even the pre-covid-19 NPA quantum in a timely manner, let alone any post-covid-19 scenarios.
- We will likely need a one-time surgical solution of a Bad Bank or a programme fashioned after the US Troubled Asset Relief Program (TARP), to remove a chunk of at least the pre-covid-19 large NPA and resolve them separately as efficiently as possible. This surgery will likely have to be accompanied by another round of recapitalization and resolution of some financial institutions.
- Second, we can no longer kick the can down the road on addressing the many issues that dog chronically stressed sectors such as real estate, power, MSME, telecom, airline, shipping and others. These are extremely difficult issues to resolve. Any steps here will likely ruffle many feathers—including that of promoters, consumers and financiers. But for the sake of the financial sector and the broader economy, playing the ostrich is no longer an option.
- Third, the need to improve ease of fresh investments cannot be overstated. Banking credit must flow for India to invest and create jobs and output, and in turn, there is a need for sustainable investment opportunities. In this regard, Prime Minister Narendra Modi's speech clearly listed all the ingredients for attracting investments —such as reform of land, labour, laws and drawing in of supply chains. Follow through and execution is now critical. Creating sustainable jobs and output clearly holds the key to our economic prosperity.
- Finally, even as we treat the tumour and nurse the patient back to health, the financial sector ecosystem cannot be allowed to revert to its old unhealthy lifestyle. First, public sector banks ratcheted up enormous NPAs over the last decade, requiring over ₹3.6 trillion of taxpayer equity

infusion so far. Reforms such as those suggested by the P. J. Nayak committee (May 2014) may be essential to grant public sector bankers a level playing field, professional autonomy, and then hold them truly accountable.

- Second, there have been egregious governance issues across all entities—private and public—in the financial services ecosystem. We need an overhaul of governance across risk management, auditors, boards, rating agencies, regulators, legal framework and government policy. Third, significant debt market reforms are needed to support the financial ecosystem.

THE ECONOMIC CONSEQUENCES

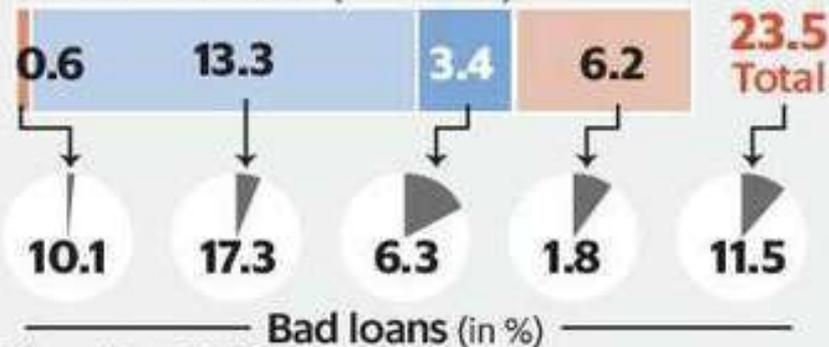
- Collectively, all of us have acquiesced in this wilful blindness towards NPAs, the powerful metric that reflects our economic health and progress.
- There are some plausible uncharitable reasons for this, such as our natural preference for good news over bad, especially if our own accountability and well-being are at stake. Let's be kind to ourselves and ignore these for now.
- There are other better-intentioned reasons. Former regulators have argued that in the absence of a durable resolution framework pre-IBC, NPA recognition would have instilled panic without offering ways out. Other economic thinkers scoff at the notion of "honesty"—what about the credibility of Chinese data, they ask. Senior bankers aver that NPA recognition shuts the door on any fresh funding for impacted businesses, condemning them to a death spiral without giving them time to recover. Some believe there are no durable solutions to some of the underlying problems—the power sector, for instance, is beyond repair, they say. Finally, there are even those that quote national interest—what will happen to the country, they ask, if we were to come out with the real numbers? Personally, I see very little merit in these arguments.
- Yes, closing our eyes to our health reports can help stave off an immediate panic. But as the last decade has demonstrated, this denial can lead us to procrastinate over the treatment and worsen our economic health substantially. Any comparison with China is frankly a waste of time, until we create the jobs and output that China has over the past three decades.
- Next, I am all for providing reasonable time for businesses to recover from temporary shocks, and covid-19 forbearance is a great example. However, this past decade clearly indicates that we have to draw the line somewhere.
- On resolving deep-seated issues, there are solutions to every problem before the country, subject only to our willingness to listen, explore and execute. Finally, on the question of national interest, has ignoring our true financial health really served our country and its economy well thus far? As they say, the path to hell is paved with good intentions. To conclude, by closing our eyes to the real health report of our financial ecosystem, we do the Indian economy a great disservice. Until at least policymakers at the cockpit acknowledge the truth, we could struggle to address the core and difficult issues that dog our financial sector and the real economy.
- Estimates of how our NPAs could pan out can give us crucial inputs into the design, extent and focus of any relief and recovery package that we put together now. At a time when we have limited fiscal and financial stability space, these insights would be crucial.

SIGNS OF STRESS

Chart 1: If the sector-wise NPA ratio of banks is applied to NBFCs, the bad loan ratio even without a pandemic is 11.5%.

- Agriculture and allied activities
- Industry
- Services
- Retail and other loans

NBFC advances* (in ₹ trillion)



*As on Sept 2019

₹2.7 trillion was the total quantum of non-performing assets in the NBFC sector pre-covid

Chart 2: Post-covid, a scenario projection indicates the overall bad loan burden among banks+NBFCs could cross 19%.

Bank+NBFC advances (in ₹ trillion)



₹23.2 trillion is the expected total bad loan burden of banks and NBFCs in a post-covid scenario

Source: RBI financial stability reports, TransUnion CIBIL, Observatory Group scenario

TOPIC 18. MIGRATION

- Millions of migrant workers journeyed home in the midst of a lockdown imposed to contain the spread of the coronavirus. This has led to reverse migration. If the situation persists, it can negatively impact the economy and make recovery difficult. Mint takes a look.

Why is reverse migration taking place?

- Migration from rural to urban areas is a key in any country's development. In India's case, the surplus labour in agriculture migrates for jobs in the more productive sectors of the economy. However, most migrant jobs in urban areas are informal and are unable to provide social security. A shock such as covid-19 can put migrant workers in a vulnerable situation, in which reverse migration might seem to be the most logical coping mechanism available to them. The fear of losing their sources of livelihood and shelter in urban areas during a lockdown forced migrant labourers to journey home.

Are there jobs for them in the rural economy?

- Rural India's overburdened and agriculture-dependent economy with an underemployed working population is incapable of taking care of millions of workers going home. Excessive reliance on agriculture and the lack of a diversified economic structure makes it tough to create alternative sources of employment. Programmes such as the Mahatma Gandhi National Rural Employment Guarantee Scheme and the decision to boost micro, small, and medium enterprises can help bring the rural economy back on track but may not be enough to gainfully employ them in rural areas.

Will migrant workers return to urban areas?

- It is likely that the reverse migration is temporary and will return to normal after the threat of covid-19 has subsided. However, the rural economy cannot match wage expectations of inter-state migrants. As India continues to develop, job opportunities will be created across sectors. This will gradually lead to more migration from rural to urban areas.

How can it affect the economy?

- As India reopens the economy post the lockdown, labour shortage in urban centres has implications and can delay economic recovery, which can affect social stability. The construction industry, which is the nation's largest job creator, is already facing severe labour shortage. The productivity of workforce involved in agriculture is lower than the urban workforce. Millions of workers going back to the rural economy could bring national productivity levels down and prolong economic recovery post covid-19.

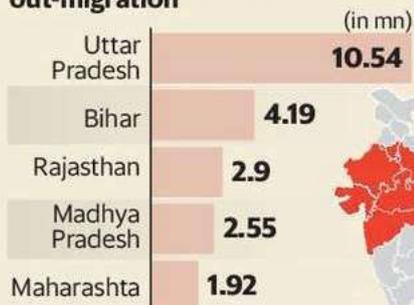
Who will bear the heat of reverse migration?

- States that experience high rates of out-migration to urban areas are also the ones that have high rates of unemployment. It might be exceedingly difficult for them to absorb returning migrants, largely because of the fear of escalation in the spread of covid-19, which could initiate a health crisis in an already overburdened economy. On the other hand, the rich states of western and south India who host migrant workers are in a hurry to send them home to avoid unrest.

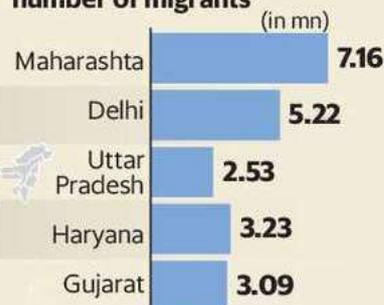
Back to base

States that see high rates of out-migration to urban areas are also the ones that have high unemployment rates. It may be difficult for states with high rural poverty rates like Uttar Pradesh and Bihar to absorb the returning migrants.

Top 5 states experiencing out-migration



Top 5 states receiving highest number of migrants



Source: Inter-State Migration India (Census 2011)

TOPIC 19. POLICE FORCES AND DEATHS

- For the past week, protests against police brutality have spread outwards from US.
- Worldwide, police forces are known to use unnecessary force and often it is poor and marginalized communities who face batons and guns.
- In Nairobi, 200 people from one of the city's poorest neighborhoods marched peacefully this week to protest police brutality during the covid-19 lockdown.
- In many countries, especially in Asia and Africa, police have inherited methods used by colonial rulers, and little has changed despite decades of independence.
- Iceland is one of the rare countries where just one person has been killed by police in its history.
- Data on people who die in custody is hard to find across the world, but in US, far more people die at the hands of the police than in many other countries (see chart).

More deaths in US police custody

Deaths in police custody (2015-16)



Note: Cause of deaths in custody include physical assault by police, natural causes, suicide and illness

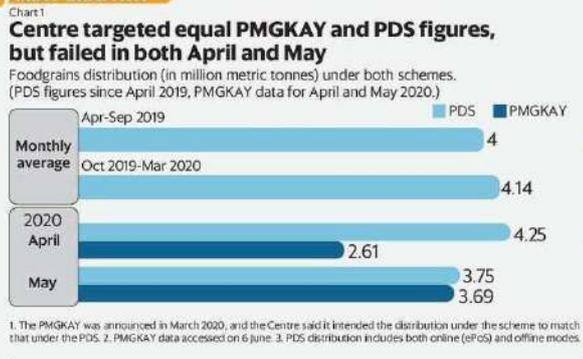
Source: NCRB, CNN, CBC, Daily Nation

TOPIC 20. FOOD SECURITY

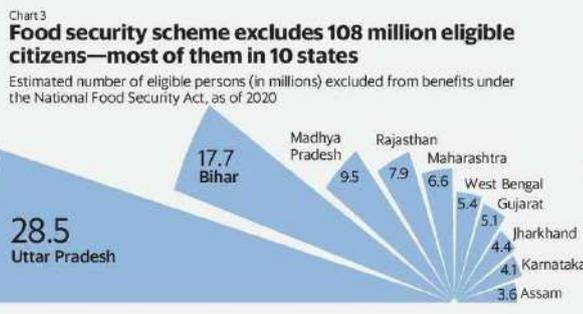
- On 26 March, the Centre announced additional food supplies for two-thirds of the population as part of its first lockdown package. The **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)** would support families until at least June, by tapping into the network of fair-price shops under the already existing public distribution system (PDS). However, two months into the scheme data shows that only a handful of states have met distribution targets.
 - The scheme was announced on the second day of the nationwide restrictions to contain the spread of coronavirus.
 - It entitles the 774 million beneficiaries of the National Food Security Act (NFSA) to an additional 5 kg of food grains and 1 kg of pulses every month in April, May, and June.
 - Food grain allocation is done by the Centre's Food Corporation of India, while states are responsible for the procurement and distribution.
- Government data for April and May shows the distribution of these additional food grains has been uneven across states, resulting in the potential lack of food security. Most states have struggled to meet targets, with Madhya Pradesh and Gujarat being prominent laggards. Chhattisgarh, Andhra Pradesh and Rajasthan have ensured close to complete and consistent distribution.
- The new scheme rides on the PDS, a targeted welfare scheme that reaches two kinds of households. The first comprises 204 million 'priority households', with each individual entitled to 5 kg subsidized wheat or rice at ₹3 per kg. The second is 23 million Antyodaya Anna Yojana households, who are the most vulnerable and get 35 kg food grains per month per family. The PMGKAY covers both categories. The Centre's stated objective for PMGKAY was to double food grain distribution under PDS between April and June.
- However, this did not happen in April, the first full-lockdown month: 4.25 million metric tonnes (MT) was distributed under the regular PDS, but only 2.61 MT under PMGKAY.
- The doubling nearly happened in May, but this was when the regular PDS distribution was lower than usual. A further increase under PMGKAY is likely in June as states try to make up for the shortfall of these two months (**See chart 1**).
- Under PMGKAY, all states have been allocated foodgrains for three months—15 kg per beneficiary. By May-end, 16 states and Union territories had procured more than 90% of their respective three-month quota. The higher this number, the better it is, as it means the state has stock to distribute.
- However, states have struggled to distribute. For timely food for beneficiaries, a state must distribute 33.3% of its quota each month. Chhattisgarh happens to be the only state that met this optimal figure in both months. Ten states reported distribution of over 30% in both months. States are following different distribution approaches.
- If Chhattisgarh presents consistency, Karnataka and Jharkhand took a lump sum approach, distributing two months of stock in May. Worryingly, there are 16 states and union territories whose total distribution in these two months is below 60%, against the optimal 66.6% (**See chart 2**).
- The Centre, in a rebuttal to a news report, has attributed the PMGKAY distribution deficits to logistical and strategic reasons. The government said that while some states may distribute two to three months' quota in one go, others are balancing PMGKAY distribution along with PDS stocks to manage the supply chain and respect physical-distancing norms. The numbers for June will show if that was indeed the case. Demand is not an issue. If anything, it would be more in states such as Uttar Pradesh and Bihar, following the massive reverse migration.
- However, many of these returnees might be outside the purview of the NFSA, which was formulated in 2013 using Census 2011 data. In a recent study, researchers Jean Dreze, Reetika Khera, and Meghana Mungikar used 2020 population projections to estimate that still using Census 2011 population data excludes 108 million eligible Indians from the purview of NFSA and, by extension, PMGKAY. This exclusion was the highest in Uttar Pradesh and Bihar, possibly because of the exclusion of some of those who migrated (**See chart 3**).

- Several states are seeing an increase in demand for new ration cards, which are essential to access PDS. Factoring in PMGKAY, a five-member household would spend ₹75 a month for 50 kg of foodgrains (25 kg at ₹3 per kg and 25 kg free), which would otherwise cost them upwards of ₹1,000 in the open market. With incomes likely to remain stressed for a significant period, subsidized foodgrains will be a lifeline for poor households. Continuing PMGKAY beyond June, with wider scope, and ensuring optimal distribution becomes an imperative.

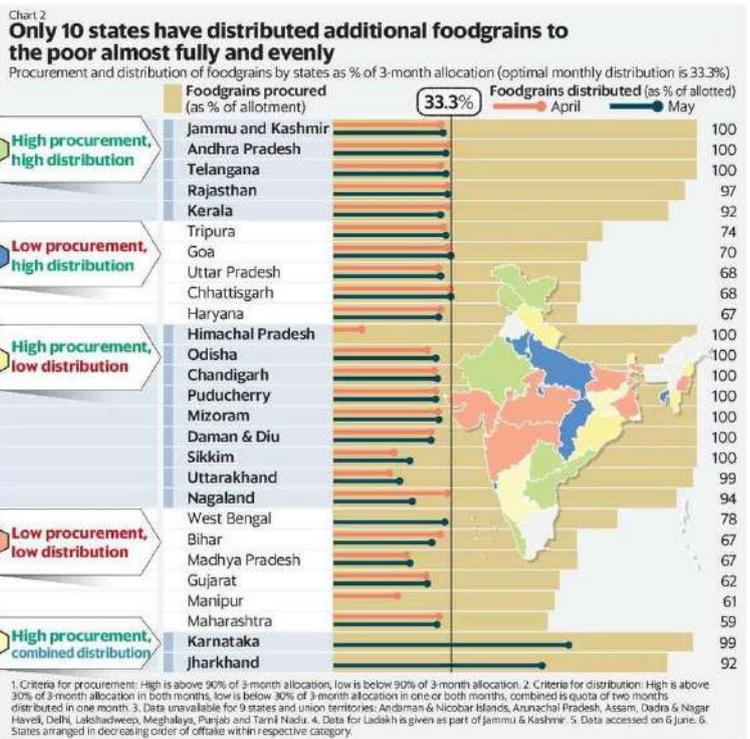
MINT GRAPHITI



1. The PMGKAY was announced in March 2020, and the Centre said it intended the distribution under the scheme to match that under the PDS. 2. PMGKAY data accessed on 6 June. 3. PDS distribution includes both online (ePoS) and offline modes.



Source: Anna's Tru dashboard, Department of Food and Public Distribution; Calculations by Jean Dreze, Reetika Khera and Meghana Mungikar based on estimates of 2020 population



1. Criteria for procurement: High is above 90% of 3-month allocation, low is below 90% of 3-month allocation. 2. Criteria for distribution: High is above 30% of 3-month allocation in both months, low is below 30% of 3-month allocation in one or both months, combined is quota of two months distributed in one month. 3. Data unavailable for 9 states and union territories: Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Dadra & Nagar Haveli, Delhi, Lakshadweep, Meghalaya, Punjab and Tamil Nadu. 4. Data for Ladakh is given as part of Jammu & Kashmir. 5. Data accessed on 6 June. 6. States arranged in decreasing order of offtake within respective category.

TOPIC 21. IFLOWS-MUMBAI

- Maharashtra's Chief Minister and Union Minister for Health and Family Welfare, Science and Technology launched an **Integrated Flood Warning System** called '**IFLOWS-Mumbai**'.
- A joint initiative between Ministry of Earth Sciences (MoES) and Brihanmumbai Municipal Corporation (BMC), **warning system will be able to relay alerts of possible flood-prone areas anywhere between six to 72 hours in advance.** Mumbai is only second city in country after Chennai to get this system. Similar systems are being developed for Bengaluru and Kolkata.

What is 'IFLOWS-Mumbai'?

- IFLOWS is a monitoring and flood warning system that will be able to relay alerts of possible flood-prone areas anywhere between 6 to 72 hours in advance.
- The system can provide all information regarding possible flood-prone areas, likely height floodwater could attain, location-wise problem areas across all 24 wards and calculate vulnerability and risk of elements exposed to flood.

How will it work?

- The primary source for system is amount of rainfall, but with Mumbai being a coastal city, system also factors in tidal waves and storm tides for its flood assessments.
- In last 2 years, researchers have been conducting studies to provide real-time weather information by measuring city's rainfall, how much water drained out, topography, land use, infrastructure development, population, lakes, creeks and data on river bathymetry of all rivers namely Mithi, Dahisar, Oshiwara, Poisar and Ulhas.
- The system has provisions to capture urban drainage within city and predict areas of flooding.
- The system comprises 7 modules- **Data Assimilation, Flood, Inundation, Vulnerability, Risk, Dissemination Module and Decision Support System.**
- The system has provisions to capture urban drainage within the city and predict the areas of flooding.
- The system incorporates weather models from National Centre for Medium Range Weather Forecasting (NCMRWF), India Meteorological Department (IMD), field data from rain gauge network of 165 stations set up by **Indian Institute of Tropical Meteorology (IITM), BMC and IMD.**

Why was this system needed in Mumbai?

- Mumbai, financial capital of India, has been experiencing floods with increased periodicity.
- The recent flood on 29th August 2017 had brought city to a standstill. Last year, post-monsoon and unseasonal rainfall as late as October, two tropical cyclones in Arabian Sea had caught authorities off guard and left a trail of destruction.
- The flood during 26th July 2005, when city received a rainfall of 94 cm, a 100 year high in a span of 24 hours had paralyzed city completely.
- Urban flooding is common in city from June to September, resulting in crippling of traffic, railways and airlines.
- As a preparedness for floods before they occur, system will help in warning citizens so that they can be prepared in advance for flooding conditions.

How will it be beneficial for Mumbai?

- Based on amount of rain recorded, time, location, topography and forecast, system is designed to generate flood warnings for specific geographical areas of city.
- All this information will then be routed to authorities.
- The early warning forecast would include alerts on rainfall information, tide levels, storm surge for low-lying areas anticipated to be affected, thereby minimizing damage from cyclones and heavy rain events in Mumbai by evacuating people to safe areas.
- The system, initially only to be accessed by civic body will enable them to issue alerts for citizens who can then avoid such zones.



TOPIC 22. US – NK SINGAPORE SUMMIT

- It was a busy few month in Korean Peninsula in 2018 between March and June. There were several preparatory talks held between governments of US, South Korea, North Korea and China, weeks before Kim and Trump were scheduled to meet in Singapore.
- After Trump's return to US, he said North Korea was no longer a nuclear threat but simultaneously ordered continuation of restrictions on North Korea and its citizens.
- Relations between US and North Korea have made for an interesting watch, particularly post Donald Trump becoming US president. In 2017, when tensions mounted between two countries, it had seemed unlikely that only a year later, two leaders would agree to meet in person, given that till November 2017, North Korea had been engaged in testing intercontinental ballistic missiles.
- Just a little more than three months later, after a meeting between South Korea's national security adviser Chung Eui-yong and North Korean leader Kim Jong Un in Pyongyang, South Korea announced that Kim had expressed interest in meeting Trump. The ball was set rolling relatively quickly when a meeting between two leaders was proposed to take place in summer that year. The historic summit was later scheduled for June 12 in Singapore. The meeting between two hit a rocky patch in May, just weeks before they were scheduled to meet, because of joint military exercises that were due to be conducted by South Korea and US, an issue that has been a long-standing bone of contention for Pyongyang.

What happened prior to Trump & Kim's meeting in Singapore?

- It was a busy few months in Korean Peninsula in 2018 between March and June. There were several preparatory talks held between governments of US, South Korea, North Korea and China, weeks before Kim and Trump were scheduled to meet in Singapore.
- In April 2018, a meeting between Kim Jong Un and South Korea's President Moon Jae-in took place at Panmunjom, near border between North Korea and South Korea. At Panmunjom summit, two leaders agreed to denuclearize Korean Peninsula, and also discussed turning armistice that had ended Korean War into a peace treaty among other issues.
- These developments were a huge change in terms of hostility with which North Korea had been approaching its diplomatic relations with US and South Korea.

What happened in Singapore?

- At Singapore summit, a joint statement was signed by two leaders, outlining goals such as a commitment to "join their efforts to build a lasting and stable peace regime on Korean Peninsula" and DPRK committing to working towards "complete denuclearization". However, researchers say statement did not address specific issues pertaining to US-North Korea relations or even Korean Peninsula.
- After Trump's return to US, he said North Korea was no longer a nuclear threat but simultaneously ordered continuation of restrictions on North Korea and its citizens. Approximately four months after Singapore Summit ended, there were reports that two leaders would meet for a 2nd summit, that was eventually held in Hanoi in February 2019.

What do relations between North Korea & US look like two years on?

- The 2nd summit in Hanoi between Kim Jong Un and Trump ended in a stalemate after two countries were unable to reach any agreement. The summit in Hanoi ended abruptly with Trump claiming that North Korea had wanted an end to all sanctions, while Pyongyang said they had only been seeking a partial lifting of UN sanctions.
- In a statement released on Friday, anniversary of meeting of two leaders in Singapore in 2018, North Korea state news agency KCNA quoted North Korea's Foreign Minister Ri Son Gwon: "Never again will we provide US chief executive with another package to be used for achievements without receiving any returns." Ri's statements continued: "Nothing is more hypocritical than an empty promise," implying that Pyongyang was dismissive of Trump's constant attempts to project that he was on good terms with North Korea's leader regardless of official diplomatic relations between the two countries.

- North Korea has also objected to what it perceives as interference in inter-Korean affairs following the US government's remarks on communication having been abruptly cut between Pyongyang and Seoul this past week. The US State Department had said it was disappointed at the recent developments on the Korean Peninsula, a sentiment echoed by the UN.
- North Korea said United States should "hold its tongue" and instead focus on its own domestic turmoil unless Washington wanted to "experience a hair-raiser". The statement attributed to Kwon Jong Gun, head of North Korean foreign ministry's North America Department, further added: "It would be good not only for the US interests, but also for the easy holding of upcoming presidential election."
- These inter-Korean tensions come at a time when North Korea and the US have reached an impasse on negotiations on nuclear capabilities of North Korea, discussions that had been aided by South Korea.
- This past week, Pyongyang announced it was cutting off all communication with Seoul in a tersely-worded statement, calling South Korea the "enemy" and warning that this was the first of several similar actions. According to experts, these moves may have been a result of North Korea's frustrations at South Korea's inability to revive, under US pressure, inter-Korean economic projects that had been beneficial to Pyongyang. Some other experts believe this break in communication may be because of anti-DPRK propaganda being launched into North Korea from activists in South Korea.

Has communication stopped between Pyongyang & Seoul before?

- This is not the first time that communication between North Korea and South Korea has temporarily ceased. Despite conflict between the two countries, over the years, according to a Reuters report, at least 49 hotlines have been established between Seoul and Pyongyang to facilitate diplomatic talks, reduce tensions and military conflict, to coordinate air and sea traffic as well as to engage in cross-border economic projects etc. According to Reuters, these lines of communication were first established in the 1970s and have been updated since with modern technology.
- When relations deteriorate between two countries, these lines of communication are stopped between two countries, till situation improves. The lines were last cut in 2016 after diplomatic relations between Seoul and Pyongyang deteriorated, coinciding with Donald Trump becoming the US president.
- During this time, Trump sent a volley of verbal attacks North Korea's way and Pyongyang engaged in a string of nuclear tests along with testing ballistic missiles. The lines of communication were only restored in 2018.

What recent incidents angered Pyongyang?

- Researchers and analysts spend hours trying to understand the state of affairs in Pyongyang through dispatches in North Korean state media. Most recently, the focus of Pyongyang's ire appears to be projects of activists and North Korean defectors in South Korea who send anti-DPRK leaflets across the border to North Korea. Along with these propaganda leaflets, other items such as rice, medicines and Bibles have also been sent across by activists using balloons.
- For several days before the lines of communication were cut, Pyongyang had expressed its anger at these actions and threatened to close an inter-Korean liaison office and other inter-Korean projects if Seoul did not stop the activists and defectors.
- North Korea followed on its threats by closing communication lines in its inter-Korean liaison office and the hotlines between the South Korea's presidential office and North Korea's leader. Communication lines between militaries of the two counties were also stopped.
- South Korea's defence ministry confirmed that daily calls had gone unanswered on North Korea's side. On Monday, South Korea announced that for the first time in two years, North Korea did not answer the liaison office line in the morning, but an afternoon call had been answered. There was no clarity on the subject of discussion during this phone call.

What's next for Seoul and Pyongyang?

- Long-time observers of the Korean Peninsula believe this recent development may just be about economic pressures that Pyongyang is facing, particularly at a time when the coronavirus outbreak that impacted the world economy. A dispatch in KCNA, North Korea's state media, said the country had

“been angered by the treacherous and cunning behaviour of the South Korean authorities, with whom we still have lots of accounts to settle.” KCNA went on to add: “We have reached a conclusion that there is no need to sit face to face with the South Korean authorities and there is no issue to discuss with them, as they have only aroused our dismay.”

- Some researchers believe severing communication lines may have been initiated to add pressure on Seoul to revive inter-Korean economic projects that would help Pyongyang, while at same time, force Seoul to stop activists and defectors from launching propaganda into country. The latter has worked for now.
- The South Korean government’s Unification ministry recently announced that it will press charges against two activists who had been sending propaganda and launching rice-filled balloons into North Korea.
- South Korea’s President Moon Jae-in has been consistently working to improve relations with North Korea and some critics believe preventing activists and defectors from launching propaganda into North Korea and charging activists may be an infringement of their democratic rights and an attempt to curb their freedom of speech.
- These inter-Korean tensions come at a time when North Korea and the US have reached an impasse on negotiations on nuclear capabilities of North Korea, discussions that had been aided by South Korea.



TOPIC 23. FUEL PRICES IN INDIA

- In theory, retail prices of petrol and diesel in India are linked to global crude prices. There is supposed to be complete decontrol of consumer-end prices of auto fuels and others such as aviation turbine fuel or ATF. Which means that if crude prices fall, as has largely been trend since February, retail prices should come down too, and vice versa.

Has that been happening?

- No. Auto fuel prices were hiked for 6th day in a row Friday since oil companies restarted revising prices starting Sunday, after an 82-day hiatus. In last six days, petrol price has gone up by Rs 3.31 per litre and diesel by Rs 3.42. This coincided with oil benchmarks heading for their first weekly declines, with Brent and US crude index (WTI) dropping about 10 per cent, breaking a rally that pushed oil off its April low as the market reconciled with the reality that Covid-19 may be far from over.

So, why the divergence in the trends?

- One main reason: Oil price decontrol is a one-way street in India — when global prices go up, this is passed on to the consumer, who has to cough up more for every litre of fuel consumed. But when the reverse happens and prices go down, the government — almost by default — slaps fresh taxes and levies to ensure that it rakes in extra revenues, even as the consumer, who should have ideally benefited by way of lower pump prices, is short changed and forced to either pay what she's already paying, or even more. The key beneficiary in this subversion of price decontrol is the government. The consumer is a clear loser, alongside fuel retailing companies as well.

How does decontrol work?

- Price decontrol essentially offers fuel retailers such as Indian Oil, HPCL or BPCL the freedom to fix prices of petrol or diesel based on calculations of their own cost and profits — essentially a factor of the price at which the source their inputs from upstream oil companies such as ONGC Ltd or OIL India Ltd, for whom the price benchmark is derived from global crude prices. Fuel price decontrol has been a step-by-step exercise, with the government freeing up prices of ATF in 2002, petrol in the year 2010 and diesel in October 2014. Prior to that, the Government used to intervene in fixing the price at which the fuel retailers used to sell diesel or petrol. While fuels such as domestic LPG and kerosene still are under price control, for other fuels such as petrol, diesel or ATF, the price is supposed to be reflective of the price movements of the so-called Indian basket of crude oil (which represents a derived basket comprising a variety — 'sour grade' (Oman and Dubai average) and 'sweet grade' (Brent) — of crude oil processed in Indian refineries).

Why haven't consumers benefited now despite the sharp fall in crude prices since February?

- Crude prices nosedived from an average of about \$55 per barrel in February to \$35 in early March, and then falling to \$20 by end March as demand slumped because of the pandemic. From that point, the prices have recovered to around \$37 now. On the other hand, in India, retail prices of fuel were frozen for a record 82-days that covered much of this period, even as the excise duty on fuels was hiked by the Centre twice. While the government claimed that the impact of the hike was not passed on to consumers, the latter, however, did not benefit from this fall in crude oil prices to record low levels. Apart from the Centre, a number of states too hiked the levies on auto fuels during this period.
- The decision to raise duties, Finance Ministry officials said, was taken in view of tight fiscal situation and that retail prices were unchanged. So, effectively, excise duty hikes by centre was to be adjusted by the OMCs against the fall in oil prices. But now, the retail prices are being progressively hiked.

Are India's taxes on fuels high?

- On May 5, Centre announced one of steepest ever hikes in excise duty by Rs 13 per litre on diesel and Rs 10 per litre on petrol, following up on another round of sharp hikes in first week of March. All of this effectively cements India's position as the country with among the highest taxes on fuel. Prior to the increase in excise duty (in February 2020), the government, centre plus states was collecting around 107 per cent taxes, (Excise Duty and VAT) on the base price of petrol and 69 per cent in the case of diesel. Post the first revision the government was able to collect around 134 per cent taxes, (Excise

Duty and VAT) on the base price of petrol and 88 per cent in the case of diesel (as on March 16, 2020). With the second revision in excise duty in May, the government is collecting around 260 per cent taxes, (Excise Duty and VAT) on the base price of petrol and 256 per cent in the case of diesel (as on 6th May 2020), according to estimates by CARE Ratings.

- In comparison, taxes on fuels as a percentage of pump prices was around 65 per cent of the retail price in Germany and Italy, 62 per cent in the UK, 45 per cent in Japan and under 20 per cent in the US.
- Now, as countries get their economies back on track, oil prices have been moving upwards from the lows seen in April. So, as OMCs pass these hikes on, consumers are forced to bear the increase in global crude prices and face up to the harsh reality — that every time the crude price drops sharply, the government uses the opportunity to fill up its coffers while pump prices for the consumer barely change. But when the reverse happens, consumers are forced to pay up more. So the government gets to encash the upside while the consumers have to make good the downside.

Do OMCs also benefit?

- The only entity that benefits at the consumers expense is the government — in fact, both the Central and state governments. OMCs, interestingly, are also among the losers from the sharp downward gyrations in oil prices. The problem for companies such as IOC or BPCL is that a continuous slide in fuel prices leads to the prospect of inventory losses — a technical term for the losses incurred when crude oil prices start falling and companies that have sourced the crude oil at higher prices discover that the prices have tumbled by the time the product reaches the refinery for processing or the finished product is ready for selling. Including both crude oil and products, companies such as IOC keep an inventory of about 20-50 days.
- For oil refiners, the inventory loss was pegged at over Rs 25,000 crore in the January-March quarter because of the 70 per cent fall in crude oil prices, and a likely plunge in their gross refining margins in the first quarter (April-June) of fiscal 2021 because of demand destruction, according to CRISIL estimates.

Did other fuels see an impact?

- Interestingly, prices of ATF was cut seven consecutive times since February. Prior to the beginning of the reduction cycle in February — when airlines had already started curtailing flights on account of low demand and travel restrictions caused by COVID-19 outbreak — the price of jet fuel stood at Rs 64,323.76 per kilolitre.
- Even as no airline operated scheduled passenger flights, the mainstay of their business, between March 25 and May 25, oil companies continued to pass on the reduction in crude oil rates in the form of cutting the price for jet fuel. Starting from May 25, the Centre allowed airlines to operate commercial passenger flights on domestic routes, hitherto with a curtailed schedule.
- Six days after the resumption of flights, the Centre announced a sharp 56 per cent increase in ATF prices, effectively negating any tangible benefits to airlines.

TOPIC 24. DBO

What is this all-weather road built by India over nearly 20 years, and why does it matter?

- Of the possible triggers cited for the People's Liberation Army's (PLA) targeting of Indian territory along the Line of Actual Control (LAC) in eastern Ladakh, the construction of the 255-km long Darbuk-Shyok-Daulat Beg Oldie (DSDBO) all-weather road is possibly the most consequential.
- Running almost parallel to the LAC, the DSDBO road, meandering through elevations ranging between 13,000 ft and 16,000 ft, took India's Border Roads Organisation (BRO) almost two decades to construct.
- Its strategic importance is that it connects Leh to DBO, virtually at the base of the Karakoram Pass that separates China's Xinjiang Autonomous Region from Ladakh.
- DBO is northernmost corner of Indian territory in Ladakh, in area better known in Army parlance as Sub-Sector North.
- DBO has the world's highest airstrip, originally built during the 1962 war but abandoned until 2008, when the Indian Air Force (IAF) revived it as one of its many Advanced Landing Grounds (ALGs) along the LAC, with the landing of an Antonov An-32.
- In August 2013, the IAF created history by landing one of its newly acquired Lockheed Martin C-130J-30 transport aircraft at the DBO ALG, doing away thereafter with the need to send helicopters to paradrop supplies to Army formations deployed along the disputed frontier.
- Defence Minister has acknowledged that "large numbers" of Chinese troops had massed along the LAC, and had "come a little further than they used to earlier", making the situation "different" this time from earlier incidents between the two sides in the same region.
- The Chinese build-up along Galwan River valley region overlooks, and hence poses a direct threat to DSDBO road.
- The token mutual de-escalation of the two armies, ahead of a series of bilateral consultations between senior military and other officials, is expected to be completed over an extended period. The withdrawals are subject to reciprocal endorsement.
- The DSDBO highway provides Indian military access to the section of Tibet-Xinjiang highway that passes through Aksai Chin. The road runs almost parallel to LAC at Aksai Chin, eastern ear of erstwhile Jammu and Kashmir state that China occupied in 1950s, leading to 1962 war in which India came off worse.
- The DSDBO's emergence seemingly panicked China, evidenced by 2013 intrusion by PLA into nearby Depsang Plains, lasting nearly three weeks.
- DBO itself is less than 10 km west of LAC at Aksai Chin. A military outpost was created in DBO in reaction to China's occupation of Aksai Chin, and is at present manned by a combination of Army's Ladakh Scouts and paramilitary Indo-Tibetan Border Police (ITBP). Both forces regularly patrol LAC.

There are additional strategic considerations in the area.

- To west of DBO is region where China abuts Pakistan in Gilgit-Baltistan area, once a part of erstwhile Kashmir principality.
- This is also critical region where China is currently constructing China-Pakistan Economic Corridor (CPEC) in Pakistan-Occupied Kashmir (PoK), to which India has objected.
- As well, this is region where Pakistan ceded over 5,180 sq km of PoK to China in 1963 under a Sino-Pakistan Boundary Agreement, contested by India.
- What makes DSDBO an "all-weather" road is 37 prefabricated military truss bridges along it. Previously an old road, largely a track, existed along same alignment as pucca road, but was practically unusable during summer due to flooding of snow-fed Shyok river or River of Death and its tributaries, including Chip Chap, Galwan, and Chang Chenmo that crisscross it.
- The Shyok river itself is a tributary of Indus, flowing through northern Ladakh and Gilgit-Baltistan. It eventually re-joins Indus at Keris, east of Skardu.
- In October 2019, Defence Minister inaugurated a 500-m-long Bailey Bridge on road. The bridge is named after Colonel Chewang Rinchen, an Indian Army hero from Ladakh. Located at 14,650 ft, it is believed to be world's highest such bridge.

- An alternative route exists from Leh to Daulat Beg Oldie through the 17,500-ft-high Sasser Pass that was part of the ancient Silk Route connecting Leh to Yarkand. It leads from the Nubra Valley into the Upper Shyok Valley en route to China's Karakoram Pass, indicating the topographical and strategic interlinking of the entire disputed region between India and China and to a lesser extent, Pakistan.
- For most of the year bar a few summer months, Sassar La — or pass — is snow-bound and inaccessible. The BRO is currently building a "glaciated road" between Sasoma (north of Leh, near the Nubra river) to the Sasser Pass, but it could take several years to complete. But even when it is, the alternate DBDSO will remain critical to the Army and its defences in the region.



TOPIC 25. GM SEEDS

- In current kharif season, farmers would undertake mass sowing of GM seeds for maize, soyabean, mustard brinjal and herbicide tolerant (Ht) cotton, although these are not approved.
- Last week, Shetkari Sanghatana — the farmers' union founded by the late leader Sharad Joshi — announced fresh plans in its agitation for use of genetically modified seeds. In the current kharif season, farmers would undertake mass sowing of GM seeds for maize, soyabean, mustard brinjal and herbicide tolerant (Ht) cotton, although these are not approved. Farmers had carried out a similar movement last year, too.

What are genetically modified seeds?

- Conventional plant breeding involves crossing species of same genus to provide offspring with desired traits of both parents. Genetic engineering aims to transcend genus barrier by introducing an alien gene in seeds to get desired effects. The alien gene could be from a plant, an animal or even a soil bacterium.
- Bt cotton, only GM crop that is allowed in India, has two alien genes from soil bacterium *Bacillus thuringiensis* (Bt) that allows crop to develop a protein toxic to common pest pink bollworm. Ht Bt, on other, cotton is derived with insertion of an additional gene, from another soil bacterium, which allows the plant to resist the common herbicide glyphosate.
- In Bt brinjal, a gene allows the plant to resist attacks of fruit and shoot borer.
- In DMH-11 mustard, developed by Deepak Pental and colleague in the South Campus of University of Delhi, genetic modification allows cross-pollination in a crop that self-pollinates in nature.
- Across the world, GM variants of maize, canola and soyabean, too, are available.

What is the legal position of genetically modified crops in India?

- In India, Genetic Engineering Appraisal Committee (GEAC) is apex body that allows for commercial release of GM crops. In 2002, GEAC had allowed commercial release of Bt cotton. More than 95 % of country's cotton area has since then come under Bt cotton. Use of unapproved GM variant can attract a jail term of 5 years and fine of Rs 1 lakh under **Environmental Protection Act, 1989**.

Why are farmers rooting for GM crops?

- In case of cotton, farmers cite the high cost of weeding, which goes down considerably if they grow Ht Bt cotton and use glyphosate against weeds. Brinjal growers in Haryana have rooted for Bt brinjal as it reduces the cost of production by cutting down on the use of pesticides.
- Unauthorized crops are widely used. Industry estimates say that of 4-4.5 crore packets (each weighing 400 gm) of cotton sold in country, 50 lakh are of unapproved Ht Bt cotton. Haryana has reported farmers growing Bt brinjal in pockets which had caused a major agitation there. In June last year, in a movement led by Shetkari Sanghatana in Akola district of Maharashtra, more than 1,000 farmers defied government and sowed Ht Bt cotton. Akola district authorities subsequently booked organisers.
- Environmentalists argue that the long-lasting effect of GM crops is yet to be studied and thus they should not be released commercially. Genetic modification, they say, brings about changes that can be harmful to humans in the long run.

What is the movement about?

- The Sanghatana has announced that this year they are going to undertake large-scale sowing of unapproved GM crops like maize, Ht Bt cotton, soyabean and brinjal across Maharashtra. Farmers who plant such variants will put up boards on their fields proclaiming the GM nature of their crop. Anil Ghanwat, president of the union, has said this action will draw attention to the need for introduction of the latest technology in the fields. He said farmers will not be deterred by any action taken against them by the authorities.

TOPIC 26. CHALLENGER DEEP

- On June 7, astronaut and oceanographer Kathy Sullivan, who was the first American woman to walk in space in 1984, became the first woman and the fifth person in history to descend to the deepest known spot in the world's oceans, called the Challenger Deep in the Mariana Trench, which is seven miles below the surface of the Pacific Ocean.
- Sullivan is now the only human who has walked in space and reached the deepest point in the ocean. She made her descent in the two-person submersible (vehicles that can be operated underwater) 'Limiting Factor' as part of Caladan Oceanic's Ring of Fire Expedition.
- Through the expedition, the team hopes to observe volcanic vents, identify new species and conduct the extensive mapping of the US Exclusive Economic Zone at the request of the National Oceanic and Atmospheric Administration (NOAA).

What is Challenger Deep?

- According to NOAA, average depth of ocean is about 12,100 feet and deepest part is called Challenger Deep, which is located below surface of western Pacific Ocean. It is approximately 36,200 feet deep.
- The first dive at Challenger Deep was made in 1960 by Lieutenant Don Walsh and Swiss scientist Jacques Piccard on a submersible called 'Trieste'. The British Ship HMS Challenger discovered Challenger Deep between 1872-1876.
- In 2012, film director James Cameron reached bottom of Mariana trench after a descent that lasted 2 hours and 36 minutes. Cameron reached a depth of about 10,908 metres on a dive in his submersible called the 'Deepsea Challenger' and became the first to complete a solo submarine dive to this spot.

Why are scientists interested in deep ocean areas?

- As per NOAA, most of the existing knowledge of the oceans comes from shallower waters, while deeper waters remain relatively unexplored, even as humans are relying more on these areas for food, energy and other resources. "Ocean exploration, however, is not randomly wandering in hopes of finding something new. It is disciplined and organized and includes rigorous observations and documentation of biological, chemical, physical, geological, and archaeological aspects of the ocean," the NOAA website says.
- Further, finding out more about deep ocean areas can potentially reveal new sources for medical drugs, food, energy resources and other products. Significantly, information from the deep oceans can also help to predict earthquakes and tsunamis and help us understand how we are affecting and getting affected by Earth's environment.

What does it take to reach the deep ocean?

- Vehicles called Human Occupied Vehicles (HOVs) may be used that carry scientists to the deep sea. Alternatively, there are unmanned Remotely Operated Vehicles (ROVs) that are linked to ships using cables and can be steered by scientists remotely, according to an article on Smithsonian.
- Even so, it is difficult for most private citizens to travel more than 100 feet below the surface of the ocean. According to a blog published by the Scientific American, "most recreational divers can't explore more than about 120 feet down due to the amount of air you need to keep your lungs pressurized at depth and to nitrogen narcosis, an intoxication by nitrogen that starts to set in around that depth (most of our atmosphere is nitrogen, not oxygen)."
- Further, technical divers can go as deep as 500 feet or more, but with an array of tanks filled with different gas blends, as per the blog.

TOPIC 27. RUSSIA OIL LEAK

- The principal reason that led to the recent 20,000-tonne oil leak at an Arctic region power plant in Russia that is now being recognized is the sinking of ground surface due to permafrost thaw.
- The thermoelectric plant at Norilsk, 3,000 km northeast of Moscow, is built entirely on permafrost, whose weakening over the years due to climate change caused the pillars supporting a fuel tank at the plant to sink, leading to loss of containment on May 29.
- Concerned by the incident, Russian officials on Friday ordered the inspection of “particularly hazardous sites” located in permafrost areas, the state-owned TASS news agency reported. “According to available data, the preliminary cause of containment loss by the diesel fuel tank was subsidence of soil and the concrete platform on it,” a spokesperson said.

What is permafrost?

- **Permafrost is ground that remains completely frozen at 0 degrees Celsius or below for at least two years. It is defined solely based on temperature and duration. The permanently frozen ground, consisting of soil, sand, and rock held together by ice, is believed to have formed during glacial periods dating several millennia.**
- These grounds are known to be below 22 per cent of the land surface on Earth, mostly in polar zones and regions with high mountains. They are spread across 55 per cent of the landmass in Russia and Canada, 85 per cent in the US state of Alaska, and possibly the entirety of Antarctica. In northern Siberia, it forms a layer that is 1,500 m thick; 740 m in northern Alaska. At lower latitudes, permafrost is found at high altitude locations such as the Alps and the Tibetan plateau.
- While permafrost itself is always frozen, the surface layer that covers it (called the “active layer”) need not be. In Canada and Russia, for example, colourful tundra vegetation carpet over permafrost for thousands of kilometres. Its thickness reduces progressively towards the south, and is affected by a number of other factors, including the Earth’s interior heat, snow and vegetation cover, presence of water bodies, and topography.

How climate change is eating away at these grounds?

- The Earth’s polar and high altitude regions — its principal permafrost reservoirs — are the most threatened by climate change. According to the USA’s National Oceanic and Atmospheric Administration, Arctic regions are warming twice as fast compared to the rest of the planet, its current rate of temperature change being the highest in 2,000 years. In 2016, Arctic permafrost temperatures were 3.5 degrees Celsius higher than at the beginning of the 20th century.
- A study has shown that every 1 degree Celsius rise in temperature can degrade up to 39 lakh square kilometre due to thawing. This degradation is expected to further aggravate as the climate gets warmer, putting at risk 40 % of world’s permafrost towards end of century— causing disastrous effects.

The threat to infrastructure

- Thawing permafrost is also ominous for man-made structures overhead.
- In May, when the Russian oil leak occurred, the Copernicus Climate Change Service recorded temperatures in Siberia at more than 10 degrees Celsius above average, and called them “highly anomalous” for the region where the power plant is located.
- As temperatures rise, the binding ice in permafrost melts, making the ground unstable and leading to massive potholes, landslides, and floods. The sinking effect causes damage to key infrastructure such as roads, railway lines, buildings, power lines and pipelines that serve more than 3.5 crore people that live in permafrost regions. These changes also threaten survival of indigenous people, as well as Arctic animals.
- Soil subsidence is a major cause for concern in Siberia, where ground levels have collapsed by more than 85 metres in some parts. In Canada and Alaska, the costs of repairing public infrastructure are escalating. As per an Arctic Council report from 2017, melting ice would make infrastructure foundations unable to withstand loads that they were able to during the 1980s — a finding that has

been corroborated by the owners of Russia's oil leak site, who said after the incident that the fuel tank's supporting pillars had held it in its place "for 30 years without difficulty".

A ticking time bomb

- Beneath its surface, permafrost contains large quantities of organic leftover from thousands of years prior — dead remains of plants, animals, and microorganisms that got frozen before they could rot. It also holds a massive trove of pathogens.
- When permafrost thaws, microbes start decomposing this carbon matter, releasing greenhouse gases like methane and carbon dioxide. Researchers have estimated that for every 1 degree Celsius rise in average temperature, permafrost grounds could release greenhouse gases to the tune of 4-6 years' of emissions from coal, oil, and natural gas — becoming a major factor of climate change in themselves.
- Along with greenhouse houses, these grounds could also release ancient bacteria and viruses into the atmosphere as they unfreeze. In 2016, a melted 75-year-old anthrax-infected reindeer carcass led to an outbreak of the disease, causing the death of a child and hospitalizing 90 people.



TOPIC 28. DELHI EARTHQUAKES

- An earthquake of magnitude 2.1 was detected near Delhi on Monday. It was the eleventh minor earthquake recorded in and around Delhi since May, the most powerful of which happened to be of magnitude 3.4. These recent earthquakes have triggered discussions on the possibility of increased seismicity around Delhi, and fears of an impending big earthquake sometime soon. None of these apprehensions have any scientific basis.

Is it unusual for Delhi to experience so many earthquakes in such a short time?

- Scientists are unequivocal in asserting that no unusual seismic activity is taking place around Delhi in the last few months.
- If you look at the earthquake catalogue, Delhi and its surrounding areas, and this would extend till Jaipur, Ajmer, Mount Abu and the Aravalli's, usually experience between two and three earthquakes of magnitude 2.5 and above every month.
- But there are monthly and annual variations as well. Geological and seismological processes are not very smooth.
- So sometimes you would expect to see higher number of earthquakes as well.
- Detection of earthquakes, especially those of smaller magnitude, being recorded in an area also depends on the number of seismic recorders installed in that area.
- The area around Delhi has the most dense concentration of seismometers anywhere in the country, even more than the Himalayan region which is seismically much more active.
- Out of the 115 detectors installed in the country, 16 are in or around Delhi. As a result, even the earthquakes of smaller magnitude, those that are not even felt by most people, are recorded, and this information is publicly accessible.

Do these small earthquakes foretell a bigger one?

- Earthquakes of magnitude four or below hardly cause any damage anywhere and are mostly inconsequential for practical purposes. Thousands of such earthquakes are recorded around the world every year, and most of them are uneventful and, they certainly do not signal any big upcoming event.
- The concept of foreshocks is something that is largely applied in hindsight. When a big event happens, all the smaller earthquakes that have occurred in that region in the near past are classified as foreshocks.
- Foreshocks are post-event definitions. The description does not exist before any big earthquake has happened. So all this talk of these being foreshocks of a big earthquake in Delhi have no basis at all.
- A big earthquake might still occur. No one can rule it out. But they cannot be predicted. So, to say that these small earthquakes are precursors to the big one is totally unscientific.

What, then, is a signal to an upcoming earthquake?

- Scientists have been working for years to identify "precursors" to an earthquake but have so far met with no success. Some special earthquakes, the ones that are triggered by volcanic activity, can be predicted to some extent.
- Predicting earthquakes in a region like Delhi is all the more difficult because the place does not lie on any faultlines. I would say we still understand a little bit about the tectonics in the Himalayan region, where two tectonic plates are meeting each other. But Delhi does not lie on a plate boundary. It is located on a single plate, and the seismic activity is generated by internal deformities. Here, we understand even less. Therefore, predicting earthquakes in advance is out of the question.
- The Himalayan region, extending from the Hindu Kush to the Northeast and going south to Southeast Asia, is seismically one of the most active regions in the world. The region has experienced several big earthquakes in the past, most recently in 2015 in Nepal.

Is a big one is coming to the region?

- Scientists say that the Himalayan region is due for a big earthquake, of magnitude 8 or even higher. That is because they have been able to measure the energy that is getting trapped under the surface as a result of one tectonic plate trying to move beneath the other one. But even here, scientists have no

idea when this big earthquake will occur. The prediction about the big one is based only on the estimate of the energy that is ready to be released.

- A magnitude 6 earthquake is typically associated with the kind of energy that was released by the atom bomb in Hiroshima. Since the magnitude of earthquakes are measured on a logarithmic scale, a magnitude 7 earthquake is about 32 times more powerful than a magnitude 6 earthquake. Accordingly, a magnitude 8 earthquake would be almost 1,000 times more powerful than a magnitude 6 event.
- Delhi area has experienced earthquakes of magnitude between five and six, but fortunately not in the last 50-60 years. You would need 1,000 earthquakes of magnitude 4 to release the energy equivalent of a magnitude 6 earthquake. These arguments have no basis.

So, is a big one coming to Delhi?

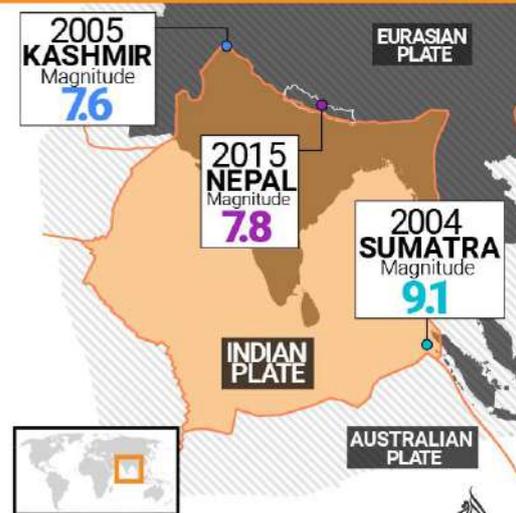
- No one knows, but a more relevant question, is what even if we knew. Supposing we know that a magnitude 6 earthquake is going to occur in Delhi at 11 am tomorrow. What can we do after that? Can we get the entire city evacuated? Is that possible? Prediction is not going to make us safe against earthquakes. What is important is that we need to make our structures earthquake resistant, we need to follow prescribed drills when an event happens, everyone must know what is the best place to run to when we are in office, or at home, or in open spaces. It is these kinds of discussions that are meaningful. Instead, what we see is speculation, rumors, and half-baked information in public discussions.
- So, a big earthquake is very much possible in Delhi. No one is ruling out that possibility. But they would occur when they have to. Earthquakes still like to come unannounced. They do not like to knock on our doors with foreshocks.

The Indian plate: A decade of earthquakes

@ajlabs

About 1.5 billion people live around the Indian plate. This is an area of considerable seismic activity. Here is a look at the deadliest earthquakes there since 2004.

- 2004 Sumatra** — Over 228,000 killed
Millions of people affected
- 2005 Kashmir** — Over 88,000 killed
138,000 wounded
- 2015 Nepal** — Over 4,300 killed
Several thousand wounded



Source: Al Jazeera, agencies, USGS, NDMA Pakistan

Last updated: 27 Apr 2015



SEISMIC FACTORS TAKEN INTO ACCOUNT

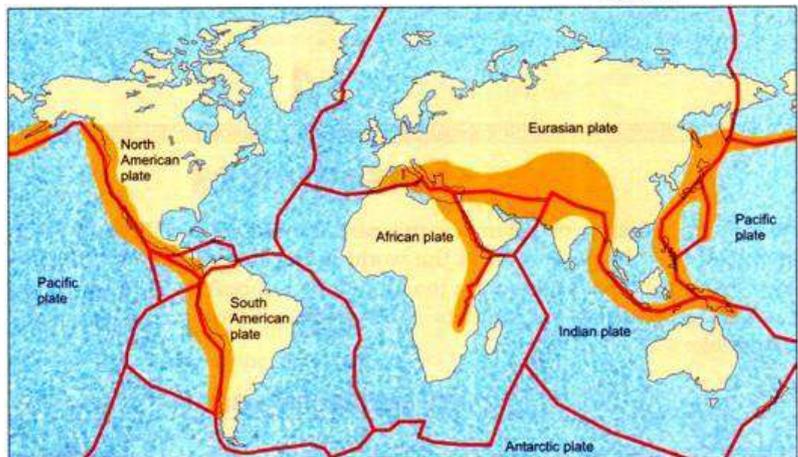
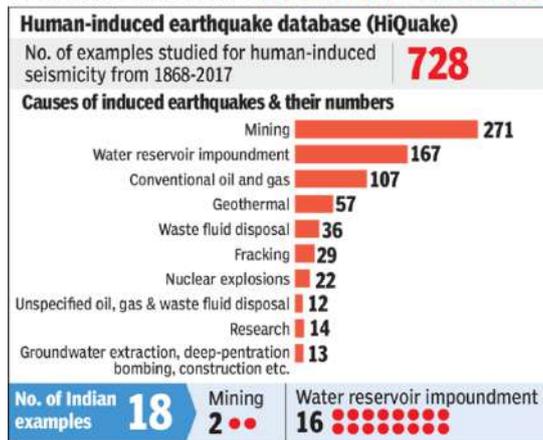


Fig. 14.3 The earthquake-prone zones (shaded) are along the boundaries of the tectonic plates.

TOPIC 29. GAIRSAIN

- With Governor Baby Rani Maurya giving her assent for declaration of Bhararisen (Gairsain) in Chamoli district as summer capital of Uttarakhand Monday, a two-decade-long wait of hill region came to an end. It is expected that declaration of a summer capital in region will expedite development of hilly areas. The development came three months after Chief Minister announced in Budget Session of Assembly held in Gairsain that town will become summer capital of state.
- **Gairsain, a tehsil in Chamoli district**, is located nearly 270-km from existing temporary capital of Dehradun. Even when Uttarakhand was carved out as a separate state from Uttar Pradesh on November 9, 2000, statehood activists had contended that Gairsain was best suited to be capital of mountainous state since it was between both Kumaon and Garhwal regions. But it was Dehradun in plains that was names temporary capital.
- Officials in the government recall that former CM Vijay Bahuguna (then as Congress leader) had held first cabinet meeting in Gairsain in the local block office building in 2012. It was then announced that Gairsain will host at least one session in a year. Bahuguna had also laid foundation stone of a Vidhan Sabha building in Gairsain in January 2013. Hence, the Congress seeks credit for taking the first steps in anointing Gairsain as summer capital of the state. Harish Rawat and the present BJP government too have held Assembly sessions in Gairsain.
- Developed in an area of 47-acres, the Vidhan Sabha complex in Bhararisen stands at a height of 2380-metre from the sea level, making it a cold location for the entire year. Sources in the government said the complex has been developed at a cost of around Rs 150 crore.
- The building is opened only for a few days a year and is kept closed for the remainder. When a session is convened, files as well as officers and staff from Vidhan Sabha and Secretariat in Dehradun make the 10-hour journey here and return as soon as the proceedings end.
- Now, with the announcement of Gairsain as the summer capital, there is a lack of clarity on the status of Dehradun. In fact, the recently published directory of the state Information department still mentions this colonial town as the temporary capital.



TOPIC 30. MIGRANT WORKERS

- A problem in dealing with issues relating to migrant labor after the lockdown was announced on March 25th, 2020 has been the absence of firm estimates of the number of displaced.
- Various govt estimates: Last week, the Chief Labor Commissioner put the figure at 26 lakh migrants stranded across the country, of whom 10% are said to be in relief camps, 43% on work sites and 46% in other clusters. The Solicitor General, on other hand, informed the Supreme Court of 97 lakh who had been transported back home.
- Among the states, UP has said 21.69 lakh workers had returned, and UP itself had sent back 1.35 lakhs. Bihar has said 10 lakhs had returned; Maharashtra has said 11 lakhs have left the state. Gujarat said 20.5 lakhs had gone back home. West Bengal said 3,97,389 migrant workers from other states were still stranded. Karnataka said in court that the state had facilitated the return of 3 lakh migrant workers.

Scholars and those watching migration estimate those dislocated to be many more.

- The Economic Survey of 2017 has a chapter, 'India On the Move and Churning: New Evidence', which is regarded as an important government document that looks at the number of internal migrants then or labor that travels to cities from rural India in spurts. Using a new Cohort-based Migration Metric (CMM) and railway data, it put interstate migration at 60 million.
- The first-ever estimates of internal work-related migration using railways data for the period 2011-2016 indicate an annual average flow of close to 9 million people between the states. Both these estimates are significantly greater than the annual average number of about 3.3 million suggested by successive Censuses and higher than previously estimated by any study.
- The then Chief Economic Adviser, now said, "Data on migrants (such as we compiled earlier) can be a useful analytical tool going forward to track the magnitude and direction of migrants. It can also be a very useful input into completing the jam infrastructure. For example, if we know the most important source and destination of migrants that could help prioritize where to focus policy efforts to make sure there is full financial inclusion." He has not done any recent estimates but cited the work of Ahmedabad-based scholar Chinmay Tumbe, who has been working on migrant labor in India as reliable.
- Chinmay Tumbe, 3 crores: He puts India's reverse migration since mid-March "conservatively at 30 million or 3 crore or 15-20% of the urban workforce". This is conservative because a lot of intra-state migration is not accounted for. He is not so sure if train journeys are a good approximation, because most returned by road rather than rail.
- "Phase 1, just before the lockdown, saw people go back for Holi. A conservative estimate of 5 million based on old passenger traffic data as the number that stayed on, mostly within-state migration. Phase 2 (March 25-April 30) started with a rush, especially from Delhi and other places where some state governments did arrange for buses. Based on numerous reports on this and district-border crossings, I estimate 5 million as a very conservative number, mostly within-state migration. For Phase 3 in May, with Shramik trains (5 million people) and road transport options saw the maximum exodus, with 20 million as a very conservative figure, most of which is inter-state migration." He regards the Shramik trains as useful to help measure "because it's the only firm number available, across states."
- Prof Amitabh Kundu & colleagues, 2.2 crore: The economist and demographer, along with K Verghese and Khalid Khan, has made estimates of "interstate migrants who have been economically destabilised during March-April 2020. The estimated number is 22 million (the break up being 16 million internal migrants and 6 million short-duration migrants destabilised)." But not all of these have returned. "Of these, about 12 million have returned. Possibly 60% of the rest would stay back. About 4 million would still want go back before the kharif season harvesting begins, unless there is sudden spurt in urban economy in the next couple of weeks."
- Dr Noman Maajid, 5 million: He works with the ILO Decent Work Team for South Asia. In a paper for The India Forum, he said: "The overall number... is likely to be around 5 million in the first wave — persons who find themselves without shelter and have been mostly casually employed."
- Scholars believe the absence of even an estimate of the numbers is evidence of the neglect migrant workers have faced.

TOPIC 31. NEAR-EARTH OBJECT (NEO)

- Earlier this week, NASA announced that a giant asteroid is expected to pass Earth (at a safe distance) on June 6. The asteroid is estimated to be between 250-570 meters in diameter, according to NASA's Jet Propulsion Laboratory (JPL). A Near-Earth Object (NEO), the asteroid is called 163348 (2002 NN4) and is classified as a Potentially Hazardous Asteroid (PHA).

What are Near-Earth Objects (NEOs), why are they studied?

- NEOs occasionally approach close to Earth as they orbit Sun NASA's Center for Near-Earth Object Study (CNEOS) determines times and distances of these objects as and when their approach to Earth is close.
- NASA defines NEOs as comets and asteroids nudged by the gravitational attraction of nearby planets into orbits which allows them to enter the Earth's neighborhood. These objects are composed mostly of water ice with embedded dust particles.
- The scientific interest in comets and asteroids is largely due to their status as relatively unchanged remnant debris from the solar system formation process over 4.6 billion years ago. Therefore, these NEOs offer scientists clues about the chemical mixture from the planets formed.
- Significantly, among all the causes that will eventually cause the extinction of life on Earth, an asteroid hit is widely acknowledged as one of the likeliest. Over the years, scientists have suggested different ways to ward off such a hit, such as blowing up the asteroid before it reaches Earth or deflecting it off its Earth-bound course by hitting it with a spacecraft. NASA's Near-Earth Object Observations Program finds, tracks and characterises over 90 per cent of the predicted number of NEOs that are 140 metre or larger in size (larger than a small football stadium).
- NASA maintains that objects of this size and larger pose a risk to Earth of "the greatest concern" due to the level of devastation that the impact is capable of causing. Further, no asteroid larger than 140 metre has a "significant" chance of hitting the Earth for the next 100 years, less than half of the estimated 25,000 NEOs that are 140 metres or larger in size have been found to date.

What is 163348 (2002 NN4)?

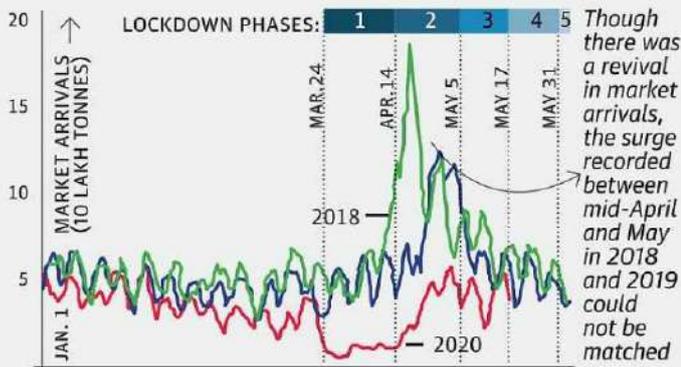
- This asteroid is classified as a PHA, which means the asteroid has the potential to make threatening close approaches to the Earth. Asteroids with a minimum orbit intersection distance (MOID) of about 0.05 (AU is the distance between the Earth and the Sun and is roughly 150 million km), which is about 7,480,000 km or less and an absolute magnitude (H) of 22 (smaller than about 150 m or 500 feet in diameter) or less are considered PHAs.
- Even so, it is not necessary that asteroids classified as PHAs will impact the Earth. "It only means there is a possibility for such a threat. By monitoring these PHAs and updating their orbits as new observations become available, we can better predict the close-approach statistics and thus their Earth-impact threat," NASA says.
- 2002 NN4 was discovered in July 2002 and is expected to approach the Earth on June 6.

FACT 1. AGRICULTURE

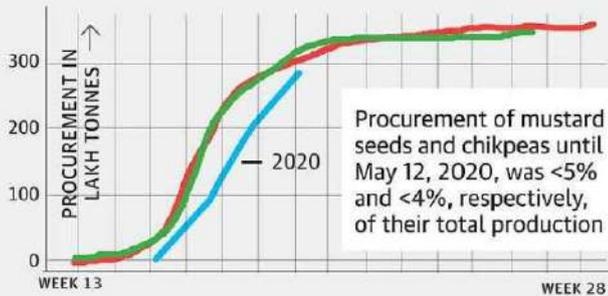
Market crash

Due to the stringent lockdown, the quantity of agricultural produce arriving in markets reduced substantially. This combined with delayed and poor procurement of farm produce forced farmers to sell at cheaper prices than expected. Both market arrivals and prices have seen a revival lately, but are still a far cry from the pre-lockdown levels. By **The Hindu Data Team**

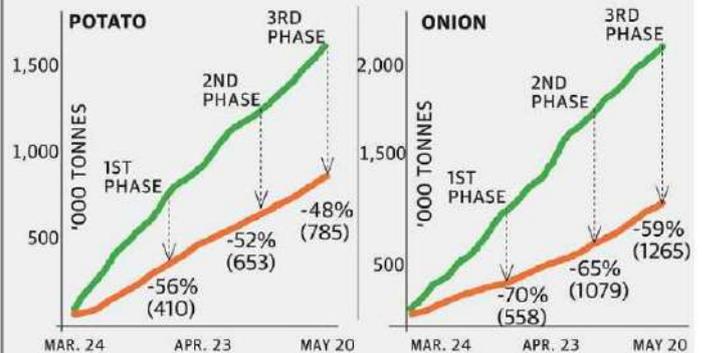
1. OUT OF THE MARKET | The chart depicts the daily market arrivals of 302 farm products into 2,938 Indian markets in 2018 —, 2019 — and 2020 —. Market arrivals dropped to very low levels during the first phase of the lockdown though subsequent phases saw a marginal revival



3. POOR SUPPORT | Govt. procurement of farm products started in most States after a two-week delay. The chart shows the nationwide procurement of wheat between the 13th and 28th weeks of 2018 —, 2019 —, 2020 —



2. VEGETABLE SHORTFALL | The chart depicts the daily market arrival of potato and onion between March 15 and May 17 for 2019 — and 2020 — into 3,000 mandis across India. At the end of lockdown 3.0 (May 17), the gap in potato arrivals between 2019 and 2020 was 7.85 lakh tonnes (-48%). For onion, it was 12.65 lakh tonnes (-59%)



4. POOR PRICES | The graph shows the price of wheat in select markets. After the lockdown was imposed, the price of wheat dropped below the Minimum Support Price (MSP) level, which means farmers were forced to sell at low prices



Sources: COVID-19 Lockdown: Impact on Agriculture and Rural Economy, Vikas Rawal et al. | DDL COVID India (devdatalab.org/covid)

FACT 2. UNEMPLOYMENT

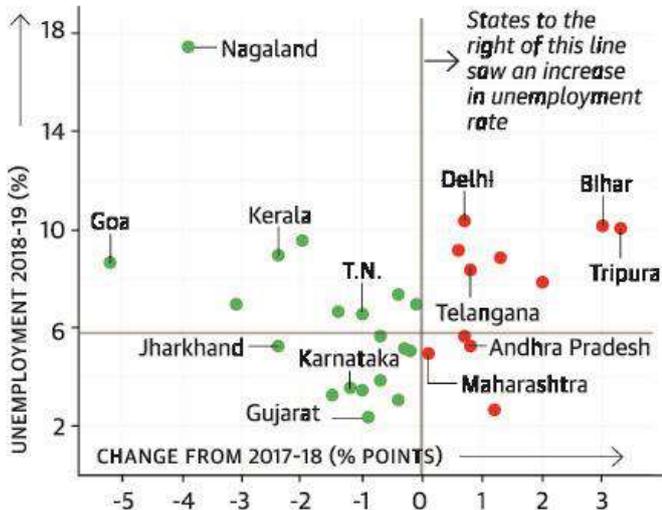
Marginal gains

In 2018-19, India's unemployment rate (% of labour force without jobs) improved marginally from a 45-year-high recorded in 2017-18. The labour force participation rate (employed plus those searching for jobs) also showed a slight improvement. But even these small gains were nullified by the COVID-19-induced lockdown in 2020

SLIGHT RISE The unemployment rate recorded a marginal decrease of 0.3% points in 2018-19 from 2017-18. The decrease in rural areas was higher than in urban areas

Year	Rural	Urban	Total
2018-19	5%	7.7%	5.8%
2017-18	5.3%	7.8%	6.1%

STATES OF UNEMPLOYMENT The chart plots the unemployment rate in 2018-19 against the change from 2017-18 across States. The rate increased in 11 States/UTs with Tripura and Bihar recording the highest rise. Goa saw the biggest decrease in the unemployment rate

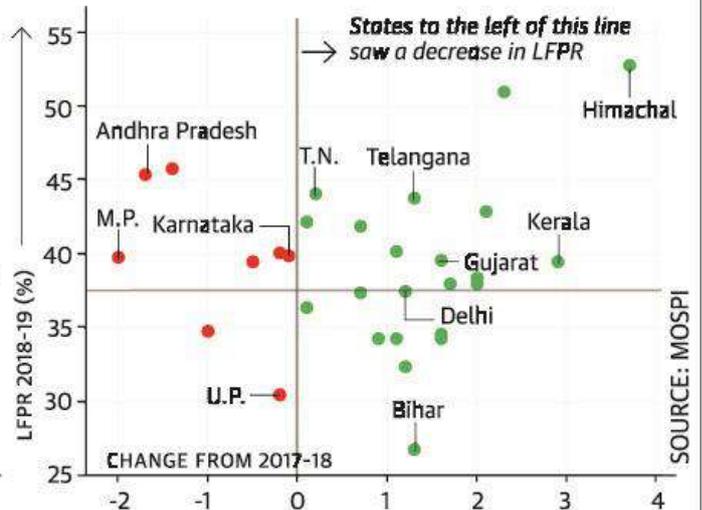


In A.P., fewer people were actively searching for jobs in 2018-19 (lower LFPR) compared to 2017-18. And of them, more people did not find jobs than before (higher unemployment)

PARTICIPATION IMPROVES The LFPR increased by 0.6% points in the period. Again, the increase was higher in rural areas, while urban areas recorded a slight growth

Year	Rural	Urban	Total
2018-19	37.7%	36.9%	37.5%
2017-18	37%	36.8%	36.9%

PARTICIPATION ACROSS STATES The chart plots the LFPR in 2018-19 against the change from 2017-18. LFPR decreased in eight States with M.P. and A.P. recording the biggest drops. A.P. was the only State which saw an increase in unemployment rate and a decrease in LFPR



These marginal gains in 2019 were nullified by the COVID-19 lockdown in 2020. According to the CMIE, the unemployment rate shot up to 23.5% in April 2020

FACT 3. COAL

'Coal import falls 20% y-o-y to 19 MT in May'

India's coal import dropped by 20 per cent to 18.93 million tonnes (MT) in May against the corresponding month a year ago, provisional data provided by mjunction showed



Subdued import demand: Given the high coal stock levels in pithead and power plants, import demand is expected to remain subdued in the short-term



17.09 MT: AMOUNT OF COAL IMPORTED IN APRIL, AS PER REVISED DATA

13.22 MT: IMPORT OF NON-COKING COAL IN MAY, AS AGAINST 12.28 MT IN APRIL

23.57 MT: Coal import by India in May last year

3.81 MT: Import of coking coal in May, as against 3.23 MT in April

242.97 MT: Country's coal import in 2019-20, which increased marginally by 3.2 per cent

0: Amount of country's 'avoidable coal imports' that the government is planning to bring by 2023-24

Mandate to CIL to boost production: Coal India Ltd (CIL), which accounts for over 80 per cent of the domestic fuel output, has been mandated by the Centre to replace at least 100 MT of imports with domestically-produced coal in FY21

FACTORS FOR INCREASE IN MAY IMPORTS OVER APRIL:

- Partial re-start of operations in some sectors
- Continued softness in coal prices in international markets

10.76%: Estimated rise in coal import this May through major and non-major ports over April 2020

Source: mjunction/PTI

FACT 4. CONSTRUCTION

'Construction sector to see 12-16% decline in investment in FY21'

Investment in the construction industry is likely to witness a 12-16 per cent decline to nearly Rs 7.3 lakh crore during the current fiscal year, as COVID-19 pandemic has severely impacted the economy and liquidity scenario, Crisil said

KEY CHALLENGES:

- Factory shutdown
- Reduced discretionary spending
- Delayed capex cycle

OUTLOOK:

The construction industry, which mirrors the economy, is expected to take a huge blow from all this. As a result, a 12-16 per cent

contraction in construction investment is expected this fiscal to Rs 7.3 lakh crore from Rs 8.6 lakh crore in FY20

REASON:

The decline in investment factors in lower capex by central and state governments due to diversion of funds towards healthcare

BACKGROUND: This is at a time when their finances are already strained and gross budgetary support to infrastructure is expected to decline due to lower revenue receipts



Amit Mehra

THE BUDGETARY ALLOCATION

by the Centre for fiscal 2020-21 for the sector witnessed a 7 per cent decline over the revised estimate for fiscal 2019-20, even as the proportion of gross budgetary support increased to 41 per cent of the total budgetary allocation in FY21 from 35 per cent in FY20

THE PANDEMIC and the subsequent lockdown will impact government revenue receipts as

direct and indirect tax collections are expected to be hit with the reduction in economic activity

STATES' INFRA ALLOCATIONS

had fallen even before the pandemic struck. The turmoil in the global economy and financial markets would also impact the external borrowing capability of the central and state governments

Source: Crisil/PTI

MODEL ANSWER

Q 1. Throw light on the significance of the thoughts of Mahatma Gandhi in the present times. [12.5 Marks, 200 words]

ANSWER

INTRODUCTION

- Gandhian thoughts or philosophy is blend of **socialism, spiritualism, environmentalism, and liberalism** with sole objectives of **solving people problem in scientific and humane way.**

BODY

- In present world we are faced with challenges such as **inequalities, environment degradation, intolerance, terrorism etc.**
- Gandhian thoughts will help us to resolve many of problems in following way

Gandhian Thoughts	Present Problems
Non-violence	<ul style="list-style-type: none">• Violence initiates a vicious circle of repression and injustice.• May give rise to Terrorism and Civil War
Satyagraha	<ul style="list-style-type: none">• Will strengthen and deepen democracy• Make government more responsive.
Swaraj	<ul style="list-style-type: none">• Boost local economy• Distribution of wealth and income
Environmentalism	<ul style="list-style-type: none">• Save us from ill effect of Pollution, Climate Change and Disasters
Women Emancipation	<ul style="list-style-type: none">• Ensure gender equality
Tolerance	<ul style="list-style-type: none">• No Mob Lynching and Communalism

CONCLUSION

- Gandhian thoughts is based on Gandhiji experimentation and experience to solve people problems without being obsessed with rigid right or left ideology.
- We should work to implement Gandhian ideals and principles to make world more sustainable , equitable , humane and inclusive.