



C.A Dated On 01-07-2019

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Monsoon Prediction :

The story so far:

The southwest monsoon made a late entry into Kerala on June 7, after a delay of nearly a week.

As of June 27, India got only slightly more than two-thirds of rain it normally gets in this month. Many places, including Chennai, are in the grip of a water crisis and about 80% of the country's meteorological divisions have registered deficient rainfall.

What is the prediction for the months ahead?

- July and August are most important for the monsoon and contribute nearly 66% of the 89 cm of rainfall that India gets from June-September.
- This year, the India Meteorological Department (IMD) had [forecast](#) in May that July rainfall would be 95% of what it usually gets and August 99% of its normal.
- These numbers were calculated on the assumption, in April, that an El Niño—characterised by a warming of the Central Pacific ocean—that seemed to be visible on the horizon, would slowly lose steam.

Cause of delay:

- The delayed progress of the monsoon, that is causing national consternation, is largely due to the laggardly branch of the monsoon that begins in Kerala and travels upwards along the western coast.
- The monsoon branch that enters eastern India, around the same time as the southern branch, is relatively better performing thanks to convective currents formed in the Bay of Bengal.

To what extent has the monsoon covered the country?

- The monsoon has covered the whole of south as well as eastern India.



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- By July 15 the monsoon should have ideally covered its last outpost in western Rajasthan, but this is unlikely given the delay in the monsoon's advent.
- In the week ahead, it's expected to make further inroads into central India and most of Gujarat and Uttar Pradesh. However, the geographic spread obscures the quantity of rain.
- Only two of India's 36 meteorological subdivisions have posted normal rainfall and 27 of them are grappling with deficient rainfall. By June 30, a low pressure pulse is expected to form over the Bay of Bengal and give a significant push to the monsoon.

How is the monsoon forecast?

- Until about the 2010, the only method employed by the IMD to forecast the monsoon was statistical models.
- These essentially involved identifying climate parameters linked to the performance of the monsoon — for instance, the sea surface temperature gradient between North Atlantic and North Pacific, the volume of warm water in the equatorial Pacific, the Eurasian snow cover.
- Their values in February and March are correlated to values of actual rainfall over a hundred years and then, using statistical techniques, extrapolated to forecast a particular year's monsoon.
- This has, however, proved wrong and the IMD missed its mark on forecasting major droughts and rain-deficits — particularly 2002, 2004 and 2006.
- The IMD responded by finding new parameters but keeping the technique essentially the same.

Only around 2015 did it start testing a dynamical system.

About Dynamical System:

- This simulates the weather at a chosen set of locations on a given day — the land and ocean temperature, moisture, windspeeds at various heights, etc — and powerful computers calculate how these weather variables will change over days, weeks, months.
- It's able to do this by solving physics equations that show how each of these weather variables is related to each other.



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- Though meteorological agencies around the world are shifting to such techniques, they still aren't considered entirely reliable for forecasting the monsoon.
- These models are also useful for anticipating heat-wave or a cold-wave and therefore useful to urban planners and government.
- The statistical model continues to be the bedrock of the IMD's forecast philosophy but its days are numbered.

Does the monsoon have a bearing on India's water crisis?

- Yes and no. India's water crisis, according to experts, is due to over-extraction of groundwater resources and not enough storage of rain water and surface water.
- The Central Water Commission, in its recommendation of how reservoirs should store and release water assumes that reservoirs will be empty on June 1 and gradually refill over the course of the monsoon, and be available for the non-monsoon months.
- Given that June contributes only 17cm or about 20% of the monsoon rainfall and is known to progress in spurts, farmers have already delayed sowing and relying on crop varieties that grow relatively quickly.
- Moreover, several farmers plant intensely water-guzzling crops that aren't suited to their climate or prevalent water table.
- While a July rainfall can temporarily alleviate parched ground, it can't solve the graver crisis of depleting groundwater and insufficiently charged aquifers.

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Mera Aspataal:

Why in News?

Celebrating Doctors' Day (July 1) at a time when assaults on doctors at workplaces is seeing a spike across the country, the Union government's



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unique patient feedback service app — 'Mera Aspataal' — has thrown up some interesting data.

It indicate that the major cause of dissatisfaction among the patients includes poor behaviour of hospital staff, high cost of treatment and lack of cleanliness in medical centres.

Survey Report:

- Of those surveyed, 75% of the patients said they were satisfied and the remaining not satisfied.
- While 39% responded saying they were unhappy because of staff behaviour, 17% felt the cost of treatment was high and 12 % expressed dissatisfaction over the lack of cleanliness in hospitals.

About the App:

- Mera Aspataal (My Hospital) is a Ministry of Health and Family Welfare, Government of India (GOI) initiative to capture patient feedback on the services received from both public and empanelled private health facilities.
- It works through multiple communication channels, including Short Message Service (SMS), Outbound Dialling (OBD), a mobile application, and a web portal.
- The application allows feedback to be consolidated, analysed and disseminated on a frequently updated dashboard.
- Analysed data will be used to improve quality of services in healthcare facilities.
- Thus My Hospital aligns with the citizen-centric MyGov platform of GOI which allows patients to connect with the healthcare providers and policymakers and to have their opinion heard and acted upon.
- Launched in 2016, the app has seen a scale-up, reaching to 2.1 million patients from 29 States and Union Territories, with more than 27.4 million patients being contacted (January 2018-April 2019) through text messages and phone calls for providing feedback.

Central educaional instiutions (reservation) Bill:



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What is this Bill?

The government promulgated an Ordinance with the same name on March 7, 2019. This Ordinance will be repealed before the Bill is introduced in [Parliament](#).

This Bill is to ensure reservations in teaching positions in central institutions for persons from Scheduled Castes/Tribes, socially and economically backward classes, and those from economically weaker sections.

Why was an Ordinance passed?

- Last year, the University Grants Commission announced that an individual department will be considered as the base unit to calculate the number of teaching posts to be reserved, based on an Allahabad High Court order from 2017.
- Former Human Resource Development Minister Prakash Javadekar had said in Parliament that the government was willing to bring an Ordinance if its review petition on this directive, filed in the Supreme Court, was rejected.
- The Supreme Court rejected the review petition, and the government passed an Ordinance.
- According to this Ordinance, the system will revert to a 200-point roster. This was also endorsed by student and teacher organisations across the country.

Why is this coming up only now?

- According to the HRD Ministry, there are more than 7,000 teaching jobs lying vacant in central educational institutions. This Bill is aimed at filling those vacancies.
- The Bill also serves the purpose of fulfilling the demands of people from these sections, for their rights as mentioned in the Constitution.

How will recruitment happen?



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- According to the provisions of this Bill, [teachers](#) will be given jobs through direct recruitment.
- This means that the process of recruitment would be by inviting applications from those eligible to teach in a Central institution, as against public advertisement.

Are all Central institutions included in this Bill?

- No, there are exceptions. Those institutes deemed as institutions of excellence, and of national and strategic importance will not come under this law.
- These institutions are — Homi Bhabha National Institute (and all its constituent units), Tata Institute of Fundamental Research, North-Eastern Indira Gandhi Regional Institute of Health and Medical Science, National Brain Research Centre, Jawaharlal Nehru Centre for Advanced Scientific Research, Physical Research Laboratory, Space Physics Laboratory and Indian Institute of Remote Sensing.
- Minority institutions are also left out of this Bill.

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Use of Artificial Intelligence in Agriculture

Context:

Government has set a target of doubling of farmers' income by the year 2022. The Government has constituted an Inter-Ministerial Committee to examine issues relating to doubling of farmers' income and recommend a strategy to achieve doubling of farmers' income in real terms by the year 2022.

The committee has, inter-alia, appreciated the role of Digital Technology, which can play a transformational role in modernizing and organizing how rural India performs its agricultural activities.

Advantages:



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- The technologies include Artificial Intelligence, Big Data Analytics, Block chain Technology, Internet of Things etc.
- By use of the modern/advance technologies and Artificial Intelligence (AI) and giving accurate and timely information regarding crops, weather and insects etc. to the farmers may improve the crop productivity, reduce the risk and improve the income of the farmers.

Major technology interventions include: -

- i. Development of **Kisan Suvidha mobile application** to facilitate dissemination of information to farmers on the critical parameters viz., Weather; Market Prices; Plant Protection; input Dealers (Seed, Pesticide, Fertilizer) Farm Machinery; extreme weather alerts; Soil Health Card;
- With market information, farmers are better informed about markets to sell produce, prevailing market prices and quantity demanded in the market. Thus, they can make informed decisions to sell produce at the right price and right time.
- Development of **'Farm Machinery package for Different Agro-Climatic Zones in India'** mobile application, which gives information on farm machinery package available for state-wise, agro-climatic zone wise, district-wise, cropping pattern wise and power source wise.
 - Development of **'My Cipheth' mobile application** to help farmers to get precise information regarding the Indian Council of Agriculture Research (ICAR) developed post-harvest technologies, products and machineries.
 - Development of **mKisan Portal** (www.mkisan.gov.in) for sending advisories on various crop related matter to the registered farmers through SMSs.
- i. Launching of **e-National Agriculture Market** initiative to provide farmers an electronic online trading platform.
 - ii. Introduction of **Soil Health Card Scheme** to assist State Governments in providing Soil Health Cards to all farmers across the country once in a cycle of 2 years. Soil health card provides information to the farmers on nutrient status of their soil along with recommendations on appropriate dosage of nutrients to be applied for improving crop productivity and soil fertility.



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- iii. Using *machine learning process* along with different computer algorithm for crop classification and area estimation.

The Government has also set up 713 Krishi Vigyan Kendras and 684 Agricultural Technology Management Agencies at district level for dissemination of technologies among farm community.

In addition, farmers are provided information through Focused Publicity Campaigns, Kisan Call Centres, Agri-Clinics and Agri-Business Centres of entrepreneurs, Agri Fairs and exhibitions, Kisan SMS Portal, etc.

Black Money:

The story so far:

The Standing Committee on Finance recently came out with its report on the 'status of unaccounted income and wealth both inside and outside the country' in which, after consulting three premier think-tanks and doing multiple analyses using various methods, it came to the conclusion that there was no reliable way to quantify black money whether in India or abroad.

What is black money?

- There is no official definition of black money in economic theory, with several different terms such as parallel economy, black money, black incomes, unaccounted economy, illegal economy and irregular economy all being used more or less synonymously.
- The simplest definition of black money could possibly be money that is hidden from tax authorities. That is, black money can come from two broad categories: illegal activity and legal but unreported activity.
- Another major source of black money is income earned by companies that is routed through shell companies abroad, thereby evading tax authorities.

Why is it difficult to measure it?

- The very definition of black money makes it extremely difficult to quantify.



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- How is the government supposed to measure the economic activity that is actively being hidden from it?
- According to the Standing Committee's report, the sectors that see the highest incidence of black money include real estate, mining, pharmaceuticals, pan masala, the gutkha and tobacco industry, bullion and commodity markets, the film industry, and educational institutes and professionals.
- The estimates of the black money in the system provided by the Standing Committee vary from 7% of GDP to 120% of GDP, highlighting the wide variance in the methods of estimation.

What are some of the methods used?

One of the more popular methods is the monetary method.

- This method assumes that the existence of and changes in the share of unaccounted income is reflected in the stock or flow of money in the system.
- In other words, track the money in the economy and you'll get an idea of how much has not been accounted for.

Another method is the global indicator or input-based method.

- In this method, unaccounted income is modelled using a single universal variable with which it is assumed to be highly correlated, therefore these estimates are also called input-based estimates.
- Basically, the estimated level of activity in these indicators is compared to the reported level of GDP to arrive at an estimate of under-reporting..

A third method to measure black money is a straightforward survey.

- This one, however, requires voluntary information from people and businesses concealing their incomes and so is prone to inaccuracies.

How can the government curb black money?

There are several ways and the first is through legislative action.



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- The government has already enacted several laws that seek to formalise the economy and make it necessary to report economic transactions.
- These include the Central Goods and Services Tax Act, the various GST Acts at the State levels, the Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015, the Benami Transactions (Prohibition) Amendment Act, and the Fugitive Economic Offenders Act to name a few.
- Another method employed by the government to make it harder for transactions to be hidden is to mandate the reporting of PAN for transactions of more than ₹2.5 lakh, and the prohibition of cash receipts of ₹2 lakh or more and a penalty equal to the amount of such receipts if a person contravenes the provision.

The Income Tax Department has also started monitoring non-filers of income tax returns using third-party information to identify persons who have undertaken high value financial transactions but not filed their returns.

India and RCEP:

The story so far:

The Association of South East Asian Nations (ASEAN), which announced the idea of a Regional Comprehensive Economic Partnership (RCEP) in 2012, is pushing stakeholders to conclude talks by the end of 2019 and take it forward.

India apart, Australia and New Zealand have raised concerns about joining such a partnership.

What is RCEP and why does it matter for the world?

- Billed as the world's biggest trade agreement, the RCEP of 10 ASEAN countries with its six free trade agreement (FTA) partners India, China, Australia, New Zealand, Japan and South Korea could well change the face of global trade as we know it.



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- The RCEP includes countries that make up 45% of the world's population with 33% of its GDP, and at least 28% of all trade in the world today.
- If the RCEP is concluded, as ASEAN countries that are driving it hope it will be, by the end of this year, it will bring stability to an otherwise unpredictable world market.
- The worry is that it could also make world trade less flexible, putting members into a quasi-bloc with China at the helm.
- Most RCEP members also conduct substantial trade with the United States, and the ongoing U.S.-China trade war may force many of them to take sides, causing a geopolitical rift within the group even before it is fully formed.

Why has it taken so long to negotiate?

- While much has been agreed on, and all countries remain committed to concluding the RCEP agreement, the last-mile will only be crossed when all those concerns are met.
- In May this year, China proposed a plan to conclude the negotiations without the naysayers, i.e. take the ASEAN+3 (China, Japan and South Korea) into the agreement, while leaving space for India, Australia and New Zealand to join later.
- The Malaysian Prime Minister, Dr. Mahathir Mohamad, echoed the idea after the ASEAN summit last week, but the move was opposed by most in the grouping. As one ASEAN diplomat put it, given the size of India's market there is "no point without India in RCEP".
- For India, too, there are many reasons to stay in the deal. Apart from giving up the first mover's advantage, India would give up the chance to frame the grouping's rules and investment standards if it fails to join the RCEP at this stage.
- Staying out would also run counter to the Narendra Modi government's plans to ramp up its engagement with ASEAN countries through the "Act East" policy, as well as its hopes for maritime cooperation in the India-Pacific.

Why is India holding up the deal?



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- India's chief concern with the RCEP is the fact that it needs to protect its economy from the flooding of cheap imports from China.
- Of all the countries in the RCEP, India is the only one not involved in any bilateral or multilateral negotiations for an FTA with China, and the worry for the government and industry is that an FTA within the RCEP will just become a cover for duty free trade into India for Chinese goods.
- RCEP negotiators have thus far agreed to allowing India a differential tariff ladder, for its FTA partners and its non-FTA partners (China, Australia and New Zealand) within the grouping.
- China wants zero tariffs for over 90 per cent tariff lines however, which could see low-cost "Made in China" goods kill locally manufactured goods.
- Several industry groups have already petitioned the government not to go ahead with the RCEP, including manufacturers of steel and aluminium, copper, pharmaceuticals and textile, which will be the worst hit in such a scenario.
- As a result, the government has been cautious about moving ahead. India has asked for strict "Rules of Origin" markings on all goods, so they don't come in through a third country.

In addition, India wants to ensure the free flow of services (manpower) to RCEP countries as well, but has faced an uphill task as most countries tighten their immigration laws.