NEWS ITEMS ON CAG/ AUDIT REPORTS (ON 17.05.2023)

1. Fake Aadhaar & Jan Dhan Accounts: CAG Must Conduct a Special Audit of Direct Fund Transfers under Centrally Sponsored Schemes: Sarma *(moneylife.in)* 16 May 2023

Calling the proliferation of fake Aadhaar cards and false Jan Dhan bank accounts a serious threat, EAS Sarma, former secretary to the government of India, has urged the comptroller and auditor general (CAG) to conduct a special audit of these fund transfers under the centrally sponsored schemes (CSSs).

Mr Sarma, in a letter to GC Murmu, CAG, says, "With special reference to funds transfers under the CSSs, this needs to be viewed against the background that, since 2014, there has been a tendency on the part of the political leadership to diminish the share of fund transfers to the states as per the rule-based allocation formula prescribed by the finance commission and, instead, unduly enlarge the share of fund transfers under Article 282, which permit the Union government to impose schemes on the states in a somewhat subjective manner, irrespective of their relevance to the requirements of each state."

"In the Budget of 2023-24, more than 83% of the funds transferred by the Union government to the states are through CSSs and other central schemes that bypass the finance commission allocation formula. In monetary terms, this amount is nearly Rs8.24 lakh crores," the former secretary says.

According to a Lok Sabha reply on 26 July 2017 (Parliament question no1761), there are 314 CSSs in 51 Central ministries linked to Aadhaar. "In most cases, under these CSSs, the Union government transfers funds directly to beneficiaries' bank accounts, without going through the concerned states and the local panchayats, thereby precluding any independent verification."

Referring to the problem of 'duplicate' Aadhaar cards, the CAG exhorted the UIDAI to "tighten the service level agreement (SLA) parameters of biometric service providers (BSPs), devise fool proof mechanisms for capturing unique biometric data and improve upon their monitoring systems to proactively identify and take action to minimise, multiple or duplicate Aadhaar numbers generated. UIDAI may also review a regular update of technology. UIDAI also needs to strengthen the automated biometric identification system so that generation of multiple and duplicate Aadhaars can be curbed at the initial stage itself."

Apparently, Mr Sarma says, UIDAI has not been able to implement this recommendation fully.

He also refers to articles written by senior journalist RN Bhaskar and Moneylife. "Mr Bhaskar's article, based on the government's replies in the Parliament and other authentic information, shows that there are at least nine states today in which the number of Aadhaar numbers exceeds the projected population of the states. This number was seven in February 2020. States where the number of Aadhaar exceeds the population may further increase in the coming days on the eve of the 2024 elections. These facts are fully known to the government but no action has yet been taken, raising questions about its intent," he says.

In the article, Mr Bhaskar showed that between 31 December 2021 and 28 February 2023, in almost all the states, excluding Andaman and Nicobar (A&N), Sikkim and Arunachal Pradesh, there has been a suspicious surge in the number of Aadhaar. "The average surge at the all-India level is 2.7%, with nine states showing surge rates in excess of that. In Meghalaya, the surge in Aadhaar has been as high as 24.5% and 9.3% in Assam."

"Twenty states had registered a swell in Aadhaar registrations within a 15-month period from 31 December 2022 and 28 February 2023. What is worrisome is that many of these states are alongside international land borders. The highest surges have taken place in North Eastern states, Uttar Pradesh and Bihar. That does call for a major investigation," Mr Bhaskar wrote in his article.

Mr Sarma, the former secretary, also quotes two articles from Moneylife, "Fraud Alert: Aadhaar Menace Also Hitting Banks, Lenders" and Fake Aadhaar, PAN Cards a Click Away: Report.

He says, "Compounding this is a parallel misuse of Jan Dhan bank accounts to which the Union government has been transferring funds to millions of CSS beneficiaries without any independent verification by the local panchayats. This has resulted in the proliferation of false Jan Dhan bank accounts as also their misuse for laundering money."

Mr Sarma further refers to articles from Economic Times- ET, Times of India, Moneylife and IndiaToday.

Raising concerns that Jan Dhan accounts can be misused by 'money mules', the Reserve Bank of India (RBI) also warned they are 'very vulnerable' to frauds and asked banks to be on guard against such activities, the former secretary says, quoting from another article by ET.

According to a report from the Morning Context, in many remote areas where broadband connectivity does not exist, genuine beneficiaries under different schemes find it difficult to get their Aadhaar identification done, resulting in their not being able to receive the benefits.

"This shows that many unauthorised persons are benefitting from the funds released by the Union government under the CSSs, whereas several genuine beneficiaries, who ought to have benefitted under those schemes, stand deprived of the same," Mr Sarma says.

"Considering that 314 CSSs involve direct bank transfers by the Union government to the beneficiaries' accounts through linkage to their Aadhaar identity, covering fund transfers amounting to around Rs8,23,857 crore, bypassing the states and the local panchayats, implying a lack of adequate public accountability, with clear evidence of the proliferation of fake Aadhaar cards on the one side, coupled with the existence of false Jan Dhan bank accounts on the other side, there is a clear possibility of large scale misuse of funds transferred by the Union government under Article 282, bypassing the rule-based transfers prescribed by the finance commission," the former secretary added.

He says, "I request the CAG to conduct a special audit of the CSS fund transfers so that the extent of misuse and misapplication of the budgeted allocations may be reported to the Parliament and the public at large." https://www.moneylife.in/article/fake-aadhaar-and-jan-dhan-accounts-cag-must-conduct-a-special-audit-of-direct-fund-transfers-under-centrally-sponsored-schemes-sarma/70785.html

2. **Indigenous combat jets and Kaveri turbofan engine: All About IAF's new aerospace plan** *(indiatoday.in)* Updated: May 16, 2023

It is a widely endorsed fact that aerospace is the domain of the future and the one who controls it, will also control the planet. As of 2023, the Indian Air Force (IAF) has a combined strength of 31 squadrons. A total of three MiG-21 Bison squadrons will be retired by 2025.

With the addition of three Sukhoi-30MKI squadrons and two LCA-Tejas Mark-1 squadrons this year, the IAF will somehow be able to make up its strength for the retiring jets and maintain up to 33 combat jet squadrons.

An additional squadron of Jaguar deep penetration strike aircraft will also retire by 2027, thus bringing down the combined strength to 32 squadrons. So, there will be a total shortfall of 10 combat squadrons by 2030, if additional fighter jets are not ordered immediately.

Meanwhile, as the deal to procure 114 foreign fighter jets (dubbed as MMRCA 2.0) progresses, simultaneous efforts are also being made towards the acquisition of indigenous fighter aircraft for filling up the gaps. Technology-intensive air power requires faster replacement of assets due to quicker obsolescence.

While IAF has a Plan-B to fight with what it has, if forced into conflict, but numbers are clearly not adequate to fully execute an air campaign in a two-front war scenario. It is imperative of time that the IAF quickly rebuilds the squadron strength and acquires modern fighters that are as good or better than the adversaries.

Developing indigenous aircraft is critical for India to become a global power. China has already moved way ahead. The Light Combat Aircraft- Tejas and the Advanced Medium Combat Aircraft (AMCA) are the main two indigenous combat aircraft projects and it is important to continuously monitor their progress.

CONCEPT OF 4th & 5th GEN JETS

The LCA-Tejas was originally envisaged as a fourth-generation combat jet and the AMCA is meant to be a fifth-generation fighter. Fourth-generation fighters are mostly multi-role. These jets use ‘energy-manoeuvrability’ concept for performing ‘fast transients’- quick changes in speed, altitude, and direction- as opposed to just high speed; lightweight aircraft with higher thrust-to-weight ratio, and use digital Fly-By-Wire (FBW) flight controls which allow relaxed static stability flight and in turn agility.

These planes have electronically managed powerplants. Pulse-Doppler fire-control-radars give look-down/shoot-down capability. Head-up displays (HUD), hands-on-throttle-and-stick

(HOTAS) controls, and multi-function displays (MFD) allow better situational awareness and quicker reactions. Composite materials help reduce aircraft weight. Improved maintenance design and procedures reduce the aircraft turnaround time between missions and generate more sorties. The F-16, F-18, MiG-29, SU-30 MKI and Mirage-2000 are all in this category.

A sub-generation called the 4.5th generation fighters evolved in the last two decades, which saw advanced digital avionics, newer aerospace materials, modest signature reduction, and highly integrated systems and weapons. These fighters operate in a network-centric environment. Key technologies introduced include a multi-function active electronically scanned array (AESA) radars; longer range BVR AAMs; GPS-guided weapons, solid-state phased-array radars, helmet-mounted display sights (HMDS), and improved secure, jamming-resistant data links.

A degree of supercruise ability (supersonic without afterburner) was introduced. Stealth characteristics focused on front-aspect radar cross section (RCS) reduction through limited shaping techniques. Eurofighter Typhoon, Dassault Rafale and Saab JAS 39 Gripen were in this category. Many 4th generation aircraft were also upgraded with new technologies. Su-30MKI and Su-35 featured thrust vectoring engine nozzles to enhance manoeuvring.

The fifth generation was ushered in by the Lockheed Martin/Boeing F-22 Raptor in late 2005. These aircraft are designed from the start to operate in a network-centric combat environment and to feature extremely low, all-aspect, multi-spectral signatures employing advanced materials and shaping techniques. AESA radars are with high-bandwidth low-probability of intercept. IRST and other sensors are fused in for situational awareness and to constantly track all targets of interest around the aircraft at a 360-degree bubble.

Advanced avionics and glass cockpit, and improved secure, jamming-resistant data-links are other features. Avionics suites rely on extensive use of very high-speed integrated circuit (VHSIC) technology and high-speed data buses. Fifth-generation fighters target “first-look, first-shot, first-kill capability”. In addition to high resistance to ECM, they can function as a ‘mini-AWACS’. Integrated electronic warfare systems, integrated communications, navigation, and identification (CNI), centralised “vehicle health monitoring”, fibre-optic data transmission, and stealth are important features. Manoeuvring performance is enhanced by thrust-vectoring, which also helps reduce take-off and landing distances.

Super-cruise is inbuilt. To maintain low radar cross signature (RSC), the primary weapons are carried in internal weapon bays. The current fifth-generation fighter projects include Lockheed Martin F-35 Lightning II, Russia‘s Sukhoi PAK FA (SU-57), China’s Chengdu J-20 and Shenyang J-31, and India’s AMCA. Japan is also exploring the technical feasibility to produce fifth-generation fighters.

LCA TEJAS MARK-2

IAF has committed to inducting 200 Tejas Mark-2 aircraft, taking the total requirement of Tejas to over 300 over the next 15 years. Tejas Mark-2 was originally planned to retain basic aircraft shape and incorporate the larger and more powerful 98 Kilonewton thrust GE F-414 engine, which was more likely to meet the originally agreed specifications of Tejas.

This would have meant a significant change to the air inlets and also the aircraft dimensions and weight would have to increase. At Aero India-2019, ADA unveiled a new model of the Tejas Mark-2, and called it a Medium Weight Fighter (MWF). This aircraft was expected to fit into IAF's requirement for the Medium Multi-Role Combat Aircraft (MMRCA). This enhanced version of Tejas, the Tejas Mark-2 MWF would be 14.6-metre-long with a wingspan of 8.5 metres (compared with 13 metres and 8.2 metres for the Tejas and 14.36 metres and 9.13 metres for Mirage 2000 respectively).

The aircraft will have a compound delta-wing with close-coupled canards. This would reduce drag in all angles of attack it was announced. The longer fuselage will allow for more fuel behind the cockpit. The Tejas Mark-2 would carry much more internal and external fuel. The maximum weight of the plane would be around 17.5 tonnes (compared to Mark-1's 13.5 tonnes). Its external stores carrying capacity will also increase from 5.3 to 6.5 tonnes. It will be equipped with a higher thrust General Electric GE-F414-INS6 turbofan engine that features a Full Authority Digital Electronics Control (FADEC) system.

The Tejas Mark-2 will also feature an indigenous integrated life support system-onboard oxygen generation system (ILSS-OBOGS) weighing 14.5 kg, a built-in integrated Electro-optic electronic-warfare suite among other improvements to avionics. It will have an infrared search and track (IRST) system and a missile approach warning system (MAWS) and a modern AESA radar.

An increase in payload capacity to 6.5 tonnes and an increased number of weapons stations from seven to 11, will allow the MWF to carry more weapons. It is said to be designed for a swing role, with BVR and close-combat capability, and precision strike.

Beyond the Tejas programme, the AMCA- India's fifth-generation fighter, can only move forward once the Tejas Mark-2 design is frozen. The realistic first-flight timeline would be around 2028. The aircraft may be inducted into the IAF around 2034-35. In any case, HAL will require at least 7-8 years to deliver the 123 Mark-1 and Mark-1A jets.

The Indian Navy has issued a Request for Information (RFI) with reference to the possible acquisition of 57 naval multirole fighter jets. However, despite rejecting the Tejas initially for being overweight, the Navy restarted testing with the NP-2 (Naval Prototype-2) in August 2018, with the first mid-air refuelling being held in September 2018.

The experience gained in operating the naval prototype will help in proving input to the development of a twin-engine deck-based fighter (TEDBF) aircraft. The TEDBF will be powered by two General Electric F-414 turbofans and will carry heavier payloads with greater range.

OMNI-ROLE COMBAT AIRCRAFT (ORCA)

As per reliable sources, India's future twin-engine Medium Class Omni-Role Combat Aircraft (ORCA) fighter is also in the works. Some of the planned features for this platform are the canards, diverterless supersonic inlet, conformal wing root tanks/containers, a larger number of hard points, and an option for folding wingtips.

It will weigh around 23 tonnes. An ambitious timeline of maiden flight in 2026 and production start in 2030 are being spoken of.

ADVANCED MEDIUM COMBAT AIRCRAFT (AMCA)

The AMCA is a fifth-generation fighter aircraft being designed by ADA and will be manufactured by HAL. It will be a twin-engine, all-weather multirole fighter. It will combine super-cruise, stealth, advanced AESA radar, super manoeuvrability and advanced avionics. The jet is meant to replace the Jaguar and Mirage 2000 aircraft and complement the Sukhoi-30 MKI, Dassault Rafale and LCA Tejas in the IAF and MiG 29K in the Indian Navy.

On April 4, 2018, the then Defence Minister Nirmala Sitharaman told parliament that the feasibility study of the programme had already been completed and the programme has already been given the nod by the IAF to initiate the AMCA technology demonstration phase before launching the full-scale engineering development phase.

Earlier, in October 2008, IAF had asked the ADA to prepare a detailed project report for a next-generation medium combat aircraft. In April 2010, IAF issued the ASQR for the AMCA, which placed the aircraft in the 25-tonne class. The first flight test of the prototype aircraft was originally scheduled to take place in 2017.

DRDO proposed to power the aircraft with two GTX Kaveri engines. In October 2010, the government released Rs 100 crore to prepare feasibility studies. Meanwhile, in November 2010, ADA sought Rs 9,000 crore to fund the development which would include two technology demonstrators and seven prototypes. ADA unveiled a 1:8 scale model at Aero India-2013. The AMCA design will have shoulder-mounted diamond-shaped trapezoidal wings and an all-moving canard-vertical V-tail with a large fuselage-mounted tail-wing. It will be equipped with a quadruple digital fly-by-optics control system using fibre optic cables.

The reduced radar cross-section (RCS) would be through the airframe and engine inlet shaping and the use of radar-absorbent materials (RAM). AMCA will have an internal weapons bay, but a non-stealthy version with external pylons is also planned.

Low-speed and supersonic wind tunnel testing and Radar Cross Section (RCS) testing were reportedly completed by 2014, and the project definition phase by February 2014. The Engineering Technology & Manufacturing Development (ETMD) phase was started in January 2014 after HAL Tejas attained IOC, and it was announced that the AMCA will have its first flight by 2018.

At Aero India-2015, ADA confirmed that work on major technological issues, thrust vectoring, super-cruising engine, AESA radar and stealth technology was going on at full swing. Russia was to support for the development of Three-Dimensional Thrust Vectoring (TDTVC), AESA Radar and stealth technology. Saab, Boeing and Lockheed Martin also offered to help with key technologies.

AMCA will initially fly with two GE-414 engines. Eventually, it is planned to be powered by two GTRE, 90-kilonewton thrust, K-9 or K-10 engines which are successors to the troubled

Kaveri engine. France has offered full access to the Snecma M-88 engine and other key technologies, and the United States offered full collaboration in the engine development with access to the GE F-414 and F-135.

AMCA PROGRAMME CLEARANCE

Two technology demonstrators and four prototypes were scheduled to go under various types of testing, and analysis in 2019. The ground reality is that they are far from it. As of 2022, the defence ministry was seeking approval from Cabinet Committee on Security (CCS) to go ahead with the prototype development phase. AMCA is intended to be a test case for fundamental Indian research in the unfamiliar field of cutting-edge aviation. DRDO's Aeronautical Development Agency (ADA), had earlier announced the targeted first flight of AMCA by 2020, and production by 2025, but has now revised the maiden flight to 2026.

AMCA NAVAL VERSION

The Indian Navy first got 'involved' in the AMCA project in March 2013 when it formally asked the DRDO/ADA if they were planning a naval version of the proposed jet. They were looking at it in relation to the upcoming indigenous aircraft carrier- IAC-2. The navy has already sought 57 aircraft of MMRCA-2.0 class. Naval AMCA (NAMCA) timeshares will match IAC-2 they feel. The Navy's requirements were sent to DRDO on September 7, 2015. They have suggested a separate team for NAMCA development.

FOREIGN COLLABORATIONS

Unsure of indigenous capability, India has informed the foreign vendors of the MMRCA-2.0 programme that the nation's quest for fighters would need commitments towards the AMCA. In anticipation, most vendors have set up joint ventures with Indian defence majors and set up research and manufacturing facilities. IAF is fully supporting the project but hopes that the timelines stated are realistic because otherwise it upsets its procurement cycles.

In any case, IAF's 114 Make-in-India fighters will partly act as a cushion for delays. Meanwhile, DRDO has been discussing with Indian defence companies including Tata, Mahindra Defence, Larsen & Toubro and many smaller specialised firms for workshare for AMCA. Part of the private Indian industry is already doing major fabrication work for defence majors like Lockheed Martin, Boeing, Airbus, BAE Systems and others.

Technologically, the AMCA is a project that runs concurrent to India's Ghatak stealth unmanned combat aircraft. Many laboratories are researching common technologies for both platforms, including shape, stealth, network-centricity, sensors and materials.

BOOSTING INDIGENOUS TURBOFAN TECH

The turbofan engine is considered the most vital component of a jet aircraft without which it simply can't take to the skies. A turbofan-based powerplant provides the requisite thrust to aerial combat vehicles for atmospheric glide and supermanoeuvrability. DRDO's GTRE (Gas Turbine Research Establishment) started the project to develop an indigenous turbofan engine christened 'Kaveri' in 1986.

As a part of the Light Combat Aircraft (LCA)- ‘Tejas’ project, the turbofan engine was to be developed from scratch. Full-scale development of the powerplant was authorised in April 1989 as a 93-month programme with a budget of $55.3 million. The original plan called for 17 prototype test engines to be built. The first test engine consisted of only the core module christened ‘Kabini, while the third prototype was the first one to be fitted with variable inlet guide vanes (IGV) on the first three compressor stages.

The Kabini core engine first ran in March 1995. Test runs of the first complete prototype of Kaveri began in 1996 and all five ground-test prototypes were in testing by 1998, while the initial flight tests were planned for the end of 1999 with its maiden flight test onboard a LCA prototype to follow the next year.

However, progress in the Kaveri development programme was slowed by both political and technical difficulties. The United States imposed economic and technological sanctions on India following the Pokhran-2 series of nuclear weapon test explosions in 1998, thus hampering the transfer of critical aero-engine technologies and components from the US to India.

The Indian scientific establishment had to develop everything through in-house research in the following years and the first prototypes were found to be throwing up blades during ground testing. In mid-2004 the engine failed its high-altitude tests in Russia ending the hopes for its introduction with the first production batch of Tejas fighter jets. As the dillydallying continued through the first half of the 2000s decade, the engine had undergone 1700 hours of tests and had been sent twice for high altitude tests to Russia by February 2008.

In July 2007, GTRE divided the Kaveri programme into two separate programmes- the K9+ programme and the K-10 programme. K9+ is to prove the concept of complete design and gain hands-on experience in aircraft engine integration and flight trials to cover a defined truncated flight envelope prior to the launch of the production version of the K-10 standard engine.

The K-10 programme is a joint venture (JV) partnership with a foreign engine manufacturer. K-10 is supposed to be the final production standard Kaveri engine and shall have less weight and more reheat thrust along with certain other changes to meet the original design intent. By May 3, 2010, about 1880 hours of engine tests had been completed on various prototypes.

A total of eight Kaveri engines and four core engines had been manufactured, assembled and tested. High-altitude testing on the core engine had also been completed successfully. One of the Kaveri prototypes (K-9) was successfully flight tested at Gromov Flight Research Institute in Moscow, on November 4, 2010. The test was conducted at the Flying Test Bed at Gromov, with the engine running right from take-off to landing, flying for a period of over one hour up to an altitude of 6 km.

The engine helped the IL-76 testbed aircraft fly at speeds of around Mach 0.6 in its maiden flight. The engine control, performance and health during the flight were found to be excellent. With this test, Kaveri had completed a major milestone in the development programme. But the CAG report released in 2011 came as a shock for many as it highlighted the cost overruns of the programme with only two out of the six milestones having been met. CAG stated that the engine was overweight and there was no significant progress towards developing the compressors, turbines and engine-control systems.

The Kaveri project was finally on the verge of closure as DRDO planned to abandon the programme in 2014 due to prolonged delay. But an offer by France's Safran Aircraft Engines (previously known as Snecma) suddenly spurred hopes in all stakeholders. France offered to spend 1 billion Euros as a part of Dassault Rafale's offsets deal and proposed a joint-venture plan with DRDO to quickly revive the Kaveri engine programme and make the first upgraded powerplants airworthy.

The good news finally came on November 20, 2016, when CP Ramanarayanan, Director General for Aeronautics Cluster of DRDO confirmed that the collaborative deal with the French company- Safran Aircraft Engines, had been sealed for the upgradation of Kaveri and making it airworthy for testing by 2018.

As of 2022, the plan is to upgrade the first batch of prototypes with significant transfers of M-88 engine technology from France to India so that Kaveri is made airworthy and integrated onboard Tejas PV-1 (Prototype Vehicle-1) aircraft by in the ongoing decade.

French experts who have assessed the engine, have stated that 25-30 per cent more work is needed to make the engine flightworthy. It is understood that there are many arms import lobbies in the government which don't want the indigenous turbofan engine programme to materialise as it will hamper the import of F-404 and F-414 engines from the United States.

These arms import czars are so powerful that they can make the people believe that night is day and vice versa. Critical technical know-how like the 'single crystal blade' technology for manufacturing of aero-engines was never given to India. DRDO had to develop almost everything from scratch. The onus now lies upon the NDA-3 government to operationalise Kaveri at the earliest with immediate execution of the maiden historic flight onboard LCA-Tejas aircraft, possibly during the next edition of the Defence Expo in 2024.

THE FUTURE

Tejas and AMCA are flagship programmes of the Indian defence manufacturing sector. Aviation technologies are much more complex and expensive than building warships and battle tanks. The fact that India struggled a lot to get FOC aircraft production for the base Tejas model indicates that there is a need for foreign help. The variables and anxieties will continue to hit the AMCA. Joint ventures or technology transfers are essential for the engine, AESA and EW systems.

Moreover, external help will also be required in handling complex aerodynamic configurations and stealth of the AMCA. Considering the slow progress in the Tejas project, it is going to be an uphill task. The indigenous fifth-generation fighter programme would require more concerted energies and professional administrative attention.

During technological holdups, there is a need to accept the harsh reality and raise the hands rather than carrying on 'hit and trial'. Foreign collaboration for the development of cutting-edge technologies and platforms will prevent unprecedented delays and cost overruns. The time to act is now, without any further delay. https://www.indiatoday.in/india/story/indigenous-combat-jets-and-kaveri-turbofan-engine-all-about-iafs-new-aerospace-plan-2380107-2023-05-16

3. **Water Crisis in India: बढ़ती गर्मी और गहराता जल-संकट** *(hindi.theindianwire.com)*
Updated: May 17, 2023

Water Crisis In India: पिछले महीने (मार्च-अप्रैल) जब बेमौसम बारिश हुई तो ऐसा लगा कि शायद इस साल गर्मी थोड़ी ठंडक भरी होगी। परंतु जाते हुए अप्रैल ने अपना रंग दिखाया और मई महीने के आगमन के साथ ही सूरज अपने ताप को दिखाना शुरू किया।

इस गर्मी का असर वर्तमान में देश के ज्यादातर हिस्से जबरदस्त गर्मी, लू और तपिश से जूझ रहे है। परंतु इस गर्मी में देश का एक बड़ा हिस्सा जिस विकट समस्या से जूझ रहा है, वह है "पेय-जल संकट"।

भीषण पेय-जल संकट (Drinking Water Crisis) से जूझता ग्रामीण अंचल

समाचार दैनिक दैनिक भास्कर ने आज (16 मई) एक वीडियो अपने वेबसाइट पर साझा किया है। इस वीडियो में कई महिलाएं 70 फीट गहरे कुएं से पानी निकालने को मजबूर है। रिपोर्ट के मुताबिक़ वीडियो महाराष्ट्र के नासिक स्थित पेठ गाँव का बताया गया है। यह इलाका इस वक़्त भयंकर जल-संकट (Water Crisis) से गुजर रहा है।

आपको बता दें, महाराष्ट्र के कुछ हिस्सों में पानी की ऐसी कमी है कि वहाँ के कई मर्द दूसरी शादी कर रहे हैं। इस दूसरी पत्नि का काम बस गाँव के दूर हिस्से से परिवार के लिए पानी लाना है। इन महिलाओं को "वाटर वाइफ (Water Wife)" कहा जाता है। यह उन सामाजिक अस्थिरता का उदाहरण है जो पानी के संकट के कारण उत्पन्न है और इसमें महिलाओं का शोषण होता है।

दैनिक भास्कर के ही (बिलासपुर, छत्तीसगढ़ से प्रकाशित) आज (16 मई) के अंक में छपे ख़बर के मुताबिक प्रदेश के कई हिस्सों में गर्मी के कारण हैंडपंप सूख गए हैं। नल-जल योजना की पाइपलाइन तो है, लेकिन पानी नहीं आ रहा। लोगों ने परंपरागत मौसमी जल-स्त्रोतों के आस पास छोटे गड्ढे खोद कर पानी निकालने पर मजबूर है।

बिहार सरकार द्वारा जारी हालिया आर्थिक सर्वेक्षण (2022-23) के मुताबिक राज्य के औरंगाबाद, नवादा, कैमूर, गया, जहानाबाद आदि जिलों में (सभी दक्षिण बिहार संभाग में स्थित) भू-जल स्तर 1 साल के भीतर औसतन 10 मीटर तक नीचे गिरा है।

पर्यावरण और प्रकृति से जुड़े विषय से संबंधित पत्रिका मोंगबे (Mongabay) ने पिछले सप्ताह एक रिपोर्ट में लिखा है कि कैसे भूजल के दोहन के कारण मध्यप्रदेश के झाबुआ जिले की एक बड़ी आबादी न सिर्फ पेयजल संकट से जूझ रही है बल्कि पानी की कमी का असर वहाँ की कृषि कार्यो पर भारी असर पड़ा है। नतीजतन वहां की आदिवासी बाहुल्य आबादी बेरोजगारी, पलायन और कुपोषण से जूझ रही है।

भूजल दोहन और पेयजल संकट की समस्या महज़ महाराष्ट्र, या छत्तीसगढ़ या बिहार तक ही सीमित है, ऐसा नहीं है। राजस्थान और गुजरात से पानी की किल्लत की खबरें आये दिन अखबारों में छाई रहती है। देश की राजधानी दिल्ली के कई इलाकों में अगर 1 दिन भी पानी का टैंकर न पहुँचे तो आलम यह कि हाहाकार मच जाए।

दुनिया के मुक़ाबले भारत में जल-संकट की समस्या ज्यादा विकराल

कुल मिलाकर भारत के कई राज्य इस वक़्त भयंकर जल-संकट (Water Crisis) से गुजर रहे हैं। ड्राफ्ट अर्ली वार्निंग सिस्टम (DEWS) के अनुसार देश का लगभग 42% हिस्सा सूखाग्रस्त (Draught Affected) है। पंजाब, राजस्थान, बिहार, महाराष्ट्र, गुजरात, छत्तीसगढ़, तेलंगाना, ओडिशा, हरियाणा, कर्नाटक, तमिलनाडु, मध्यप्रदेश और उत्तर प्रदेश "सूखा इलाका (Dry-Zone)" माने जाते हैं।

2021-22 में आई कैग रिपोर्ट (CAG Report) के अनुसार पंजाब, दिल्ली, राजस्थान, और काफी हद तक उत्तर-प्रदेश में लगभग 100 फीसदी भूमिगत जल का दोहन हो रहा है। यूनेस्को (UNESCO) की हालिया रिपोर्ट के मुताबिक़ भारत में पिछले दो दशकों से वर्षा में गिरावट दर्ज की जा रही है। नतीजतन भारत मे कृषि कार्य आदि में भूमिगत जल का उपयोग बढ़ गया है।

हाल में आये संयुक्त राष्ट्र संघ की एक रिपोर्ट (UN World Water Development Report 2023) ने बताया है कि 2050 में दुनिया की 1.7-2.4 अरब आबादी जल-संकट से जूझ सकती है जिसका सबसे बड़ा असर दुनिया की सबसे बड़ी आबादी वाला देश यानि भारत पर पड़ने वाला है।

वजह साफ़ है। धरती के कुल जल संचय का लगभग 97.3% हिस्सा खारा जल है जो पेय-जल के रूप में सीधे इस्तेमाल नहीं किया जा सकता। पृथ्वी के कुल जल संचय का मात्र 2.7% हिस्सा ही स्वच्छ जल माना जाता है। इस स्वच्छ जल में भी ज्यादातर हिस्सा (लगभग 2%) ग्लेशियर, हिमखंड, वातावरण में (जलवाष्प के रूप में) मौजूद है। शेष बचे स्वच्छ जल का भाग ही पेयजल के रूप में इस्तेमाल हो सकता है।

दुनिया मे उपलब्ध कुल पेय जल का मात्र 4% हिस्सा ही भारत मे मौजूद है, जबकि दुनिया की कुल आबादी का 16% भाग भारत मे निवास करती है। जाहिर है, पानी के लिये हाहाकार तो मचना स्वाभाविक है। 1994 में भारत मे पानी की उपलब्धता 6000 घनमीटर प्रति व्यक्ति था, जो वर्ष 2000 में घटकर 2300 घनमीटर प्रति व्यक्ति रह गया। और अब ऐसा अनुमान लगाया जा रहा है कि वर्ष 2025 में यह घटकर औसतन 1600 घनमीटर हो जाएगी।

परंतु क्या हम इस खतरे से सचमुच वाकिफ़ हैं? और अगर वाकिफ़ हैं भी तो क्या इसके लिये समुचित उपाय कर रहे हैं? भारत के राजनीतिक दल चुनावों में पानी के बिल तो शहरी क्षेत्रों में माफ़ करने की घोषणा करते हैं; परंतु पानी की उपलब्धता को लेकर इतने सजग और प्रयासरत क्यों नही दिखते?

कहीं बिहार, महाराष्ट्र, पंजाब, हरियाणा, राजस्थान जैसे राज्य हर वर्ष पेयजल संकट से दो चार होते हैं, लेकिन ऐसा लगता है कि कोई उनकी सुध लेने वाला नहीं है। ग्रामीण अंचल के सुदूर इलाकों के लोग दूषित पानी पीने पर मजबूर हैं।

पानी सभी जीवों के लिए कितना आवश्यक है, यह हम सब जानते हैं। लेकिन इसके दोहन और इसके बर्बादी से हम बाज नहीं आते। भारत ने अगर समय रहते इन समस्या का निदान न ढूंढा तो आने वाले भविष्य में इसका प्रभाव सामाजिक, आर्थिक, और पर्यावरणीय कुप्रभाव पड़ेंगे। https://hindi.theindianwire.com/water-crisis-in-india-%E0%A4%AC%E0%A4%A2%E0%A4%BC%E0%A4%A4%E0%A5%80-%E0%A4%97%E0%A4%B0%E0%A5%8D%E0%A4%AE%E0%A5%80-%E0%A4%94%E0%A4%B0-%E0%A4%97%E0%A4%B9%E0%A4%B0%E0%A4%BE%E0%A4%A4%E0%A4%BE-

%E0%A4%9C%E0%A4%B2-%E0%A4%B8%E0%A4%82%E0%A4%95%E0%A4%9F-242543/

STATES NEWS ITEMS

4. CAG smells Rs 60 crore scam in Chandigarh electricity dept, begins special audit; Says a letter in April evoked no action *(indianexpress.com)* Updated: May 17, 2023

A team from the Comptroller and Auditor General (CAG)'s office has found serious financial irregularities — to the tune of Rs 60 crore — in Chandigarh administration's Electricity Department during a inspection, following which they had shot a letter to the UT Adviser, Chief Engineer and Joint Electricity Regulatory Commission, highlighting the huge 'misuse of taxpayer's money'.

The letter, which was written last month (April), however, failed to evoke any action on part of the Chandigarh administration, following which the CAG decided to suo-motu conduct a special audit of the electricity department of five years, with 2020-21 as the base year.

"While conducting an inspection of the records last month, we found that an amount of Rs 60 crore had been shown as payable to some account in the year 2020-21. And then in 2021-22, a reversal entry for the same amount has been made. When we made inquiries about the amount, the department could not come up with any further records to justify the spend or give any justification," a senior official from the CAG team that inspected the power department's records said.

Following the discrepancy, the official added, a letter was shot off to the UT Adviser, Chandigarh's Chief Engineer and the JERC. However, till date no action has been taken.

"In the letter, written around four weeks ago, our office highlighted the discrepancy and hoped that action would be taken. However, nothing has been done. Therefore, we were left with no option but to order a special audit of five years with 2020-21 as the base year. And we will definitely come out with all the discrepancies in public domain soon," the official added.

A second CAG official, who asked not to be named, said that the entry mismatch in the record may have been an attempt by the electricity department to show less revenue, which would in turn give JERC the right to hike the power tariff for Chandigarh residents.

Contacted, Chandigarh Chief Engineer, CB Ojha, told The Indian Express, "Yes, we have received a letter from them highlighting an irregularity. There must have been some mismatch of data on part of the CAG. We have called the audit officials for a meeting regarding the same. A special audit is already going on and any or all discrepancies will come to the fore soon."

A text message sent to UT Adviser, Dharam Pal, seeking his response on the issue evoked no response.

Power privatisation

The Chandigarh administration has already given its nod for power to be privatised in the UT, largely owing to the losses being suffered by the Electricity Department .

On Tuesday, general secretary of Chandigarh Powermen Union, Gopal Dutt Joshi, while speaking to The Indian Express, said, “We are aware of the special audit of the electricity department that has been going. We are, however, not exactly sure why the audit was necessitated. Sometimes the department does try to show less revenue even while earning good profits. The power department showed that it was running in losses, which was one of the primary reasons for privatisation of electricity in Chandigarh.”

As per details, Kolkata-based Eminent Electricity Distribution Limited had emerged as the highest bidder — at Rs 871 crone — and hence been finalized as the firm for taking over power distribution in the city.

The matter, however, has been dragged to court with the powermen union protesting vehemently against the privatisation of electricity.

Chandigarh’s power scenario

As per details, there are nearly 2.47 lakh power consumers in Chandigarh, of which 2.14 lakh or roughly 87 per cent are domestic consumers.

Interestingly, the UT engineering department had filed a plea this year before the JERC, wherein it mentioned that in order to avoid a ‘tariff shock’ to the consumers, an average increase of 10.25% in existing retail tariff be allowed to meet the net revenue gap requirement for 2023-24.

The department submitted that the proposed tariff revision would be able to commensurate the much-needed revenue requirement for the ensuing year. However, JERC had rejected the proposal.

Chandigarh doesn’t generate power of its own

Chandigarh has no power generation of its own. It has a consumption of around 400 Mega Watts (MW) and it purchases all of its power. An approximate sum of Rs 640 crone is spent every year in purchasing power for Chandigarh. The UT power department purchases electricity at Rs 3.26 paise per unit.

The electricity department does not have its own power generation source and buys its power through its allocation from the Central generating stations (CGS): the National Thermal Power Corporation Limited (NTPC), National Hydroelectric Power Corporation (NHPC), Nuclear Power Corporation of India Limited (NPCIL), Bhakra Beas Management Board (BBMB), Satluj Jal Vidyut Nigam (SJVN) and the Tehri Hydro Development Corporation Ltd (THDC).

To meet increased demand during summers, the electricity department sometimes procures unrequisitioned surplus power from usually from power plants at Dadri, Jhajjar, Unchahar-I and Unchahar-II, among others.

The unallocated (or extra) power quota has increased from 9% to 14% this year. Last year, UT got 140 MW while this year, it is 200 MW. https://indianexpress.com/article/cities/chandigarh/cag-60-crore-scam-chandigarh-electricity-dept-8613501/

5. Congress alleges Rs 4,400 crore liquor scam during Raman regime *(dailypioneer.com)* 16 May 2023

The Congress on Monday charged that the erstwhile BJP government in Chhattisgarh led by Raman Singh committed a liquor scam totalling Rs 4,400 crore.

PCC chief spokesperson Sushil Anand Shukla said the alleged scam was done in nexus with liquor contactors between 2012 and 2017.

The Raman Singh government changed the decades-old liquor policy, Shukla said. He compared it to the allegations against the Delhi government.

Under the sale price fixation, more than two-and-a-half times price was fixed for the contractors in comparison to other states, he alleged.

The Comptroller and Auditor General (CAG) objected to it and an estimated benefit of Rs 946 crore was extended to India Made Foreign Liquor distributers and Rs 567 crore to country liquor distributors, Shukla said.

Thus, a loss of Rs 4,400 crore was suffered by the state exchequer, he said.

The then Officer on Special Duty, Samudra Singh, fled on the second day after a Congress government was formed in 2018, he said. https://www.dailypioneer.com/2023/state-editions/congress-alleges-rs-4-400-crore-liquor-scam-during-raman-regime.html

6 Three more arrested in PSC paper leakage scam *(deccanchronicle.com)* May 17, 2023

HYDERABAD: The Special Investigation Team (SIT) of Hyderabad city police investigating the TSPSC question paper leakage scam arrested three more persons on Tuesday.

With Tuesday's arrest, the arrests in the scam so far have reached 30, since it came to light in March.

The arrested are Raviteja, working as an assistant accounts officer in the Comptroller and Auditor General of India's Bengaluru branch, a mediator Shashidhar and another candidate identified as Kranti, to whom Shashidhar has supplied the paper.

Raviteja purchased the question paper from the Khammam native couple Sai Louki and his wife Sushmitha, who are already arrested.

Raviteja and Sushmitha knew each other from a private coaching centre which they had attended in the past. The couple purchased the DAO question paper from the main accused Pulidindi Praveen for Rs 6 lakh, but sold the same to Raviteja for double the price.

Shashidhar is a distant relative of another mediator Muralidhar who was arrested a few days ago. From Muralidhar, Shashidhar obtained the paper and supplied it to his relative Kranti for AEE entrance.

Officials associated with the investigation said they are verifying the details of the arrested trio and it might lead to more arrests. https://www.deccanchronicle.com/nation/crime/170523/three-more-arrested-in-psc-paper-leakage-scam.html

SELECTED NEWS ITEMS/ARTICLES FOR READING

7. 'Aatmanirbharta' in Defence: Another 164 defence items successfully Indigenised on time *(newsonair.com)* May 16, 2023

India has taken yet another step towards the dream of achieving 'Aatmanirbharta' in Defence sector. 164 Positive Indigenisation List (PIL) items, which were to be indigenised by December 2022, have met the target within the timelines. These 164 PIL items, which have an import substitution value of Rs 814 crore, have been notified by the Department of Defence Production (DDP), Ministry of Defence (MoD). The indigenisation process was carried out by Defence Public Sector Undertakings (DPSUs) in collaboration with industry partners, including MSMEs, or through in-house efforts.

The items include Replacement Units (LRUs)/Sub-systems/Spares & Components for DPSUs. Previously, DDP had announced the successful indigenisation of 2,572 items with an import substitution value of Rs 1,756 crore. With the recent notification of these 164 additional items, the total number of indigenised items (till Dec 2022) from the DDP's PILs reached 2,736, holding a combined import substitution value of Rs 2,570 crore. It is important to note that from now on, these indigenised items will exclusively be procured from the Indian industry.

India's Defence Accomplishments

Thanks to the India's recent unwavering policy initiatives and the significant efforts of the defense industry, the country has accomplished an impressive feat in defense exports in FY 2022-23. The export figures have soared to an unprecedented value of approximately Rs 16,000 crore, surpassing the previous year's total by nearly Rs 3,000 crore. This remarkable achievement represents a remarkable growth of over 10 times since the year 2016-17. Details of India's defence exports in last five years are as follows –

FY 2018-19 – Rs. 10,745 crores
FY 2019-20 – Rs. 9,115 crores
FY 2020-21 – Rs. 8,434 crores
FY 2021-22 – Rs. 12,814 crores
FY 2022-23 – Rs. 15,920 crores

According to latest defence data, India exports to over 85 countries today. Indian defence industry has proven its design and development capabilities to the entire globe, with over 100 firms exporting defence products and equipment currently. The rapidly growing defence exports and participation of 104 nations in Aero India 2023 are proof of New India's defence manufacturing capabilities soaring to new heights.

In last eight years, India has undergone a massive industry transformation from being predominantly an importer to becoming a notable exporter. Today, India exports major platforms like the Dornier-228 aircraft, 155 mm Advanced Towed Artillery Guns (ATAGs), Brahmos Missiles, Akash Missile System, Radars, Simulators, Mine Protected Vehicles, Armoured Vehicles, PINAKA Rockets & Launchers, Ammunitions, Thermal Imagers, Body Armours, as well as various systems, Line Replaceable Units (LRUs), and parts & components of Avionics and Small Arms. In fact, there is an increasing global demand for India's LCA-Tejas, Light Combat Helicopters and Aircraft Carriers too.

India has introduced many other policy initiatives and reforms in the past few years. The export procedures have been streamlined with industry-friendly changes and end-to-end online export authorisation, reducing delays and enhancing Ease of Doing Business. India also has notified 3 Open General Export License (OGEL) for export of components, technology transfer, major Platforms and Equipment. https://newsonair.com/2023/05/16/aatmanirbharta-in-defence-another-164-defence-items-successfully-indigenised-on-time/

8. India's NHAI debt servicing cost to cross Rs 500 bn by FY28 *(constructionworld.in)*
17 May 2023

The Ministry of Road Transport and Highways has stated that the National Highways Authority of India (NHAI) will exceed Rs 500 billion in debt servicing costs by FY28, as estimated and shared with a Parliamentary standing committee.

Based on government projections, the cost of servicing the debt, including interest payments and bond redemption, will reach 20.5 per cent of budgetary support in five years. This forecast assumes continued growth in budgetary allocations until FY28, following the recent trend, and a continued freeze on new borrowings. As NHAI's debt surged between 2017-18 and 2021-22, the government prohibited further borrowing in 2022-23 and started providing greater financial provisions.

According to the Ministry of Road Transport and Highways, the NHAI's debt servicing costs will increase from Rs 332.61 billion in the current fiscal year to Rs 532.39 billion by FY28.

This highlights the urgency of attracting private investments to sustain the progress of highway construction in the country and the potential strain on the exchequer due to NHAI's weak financial position.

The government's policy think tank, Niti Aayog, recently invited bids from consultants to support an evaluation study of road projects and the functioning of NHAI.

The bid document issued by the Development Monitoring and Evaluation Office (DMEO), a part of Niti Aayog, suggests that a closer examination is required to assess NHAI's ability to manage its growing debt burden and achieve its highway development targets.

As of March 2022, NHAI's total debt stood at Rs 3.48 trillion, up from Rs 237.97 billion in 2014. The majority of this debt, amounting to Rs 3.27 trillion, was accumulated between 2017-18 and 2021-22, when the private sector withdrew from highway development due to disputes and delays in the build-operate-transfer (BOT) model.

The funds were raised through bonds in 112 instalments, with the final bond set to mature in 2050. Besides debt, NHAI also faces contingent liabilities, primarily arising from disputed claims filed by contractors and developers. As of March 31, 2020, NHAI had contingent liabilities totalling Rs 717.65 billion.

While the budgetary support to NHAI may appear substantial, it includes the road and infrastructure cess, toll collection, and proceeds from Infrastructure Investment Trusts (InvITs). All tolls collected on NHAI roads are deposited in the Consolidated Fund of India and then allocated to NHAI under the expenditure head of the Permanent Bridge Fee Fund (PBFF). Cess shares are routed through the Central Roads and Infrastructure Fund (CRIF).

According to budget documents, NHAI will receive Rs 1.62 trillion in FY24, of which Rs 208.07 billion will come from PBFF, Rs 100 billion from asset monetisation, and only Rs 1,400 from CRIF, indicating a significant decrease in the share of cess. The government and NHAI have been making efforts to address the situation by attempting to revive the BOT (toll) model and aggressively monetising operational highways. During the Covid-19 pandemic, when interest rates were low, NHAI negotiated lower rates on some of its debts, resulting in annual interest cost savings of Rs 4-5 billion, according to an official.

Between 2007 and 2014, only the BOT-toll model was used for highway construction, but it came to a halt thereafter. No projects were awarded on the BOT model in 2018-19 and 2019-20. The aim is to increase the share of BOT in highway construction to 10 per cent. Under the Engineering Procurement and Construction (EPC) model, the government bears the full cost of highways. In the Hybrid Annuity Model (HAM), the government pays 40 per cent of the construction cost upfront to concessionaires and the rest in instalments.

The government's target is to allocate 60 per cent of projects through HAM, 30 per cent through EPC, and 10 per cent through BOT. An ICRA report predicts that EPC will remain the dominant model, accounting for 70-75 per cent of highway construction projects this year, while BOT will be less than 5 per cent. Monetisation is another aspect of the plan to support highway development programs, with a target of raising Rs 450 billion from asset monetisation this year.

"The funds will be raised through toll-operate-transfer, infrastructure investment trust (InvIT), and asset-backed securitisation models, with an equal distribution among all three monetisation methods," stated an official.

In the previous financial year, NHAI raised Rs 142.68 billion from asset monetisation, falling short of the Rs 200 billion target. NHAI officials express confidence in improving toll collections. Asset monetisation and increased government support are expected to address the order and debt levels, according to a report by Kotak Institutional Equities. https://www.constructionworld.in/transport-infrastructure/highways-and-roads-infrastructure/india-s-nhai-debt-servicing-cost-to-cross-rs-500-bn-by-fy28-/40888

9. Getting surety-bonds ready *(financialexpress.com)* 17 May 2023

India's infrastructure vision requires a quantum of bank guarantees that the banking system can't provide. Surety bonds are the alternative India needs.

While presenting the Union Budget 2022, the finance minister introduced surety bonds (SB) as an insurance product that could potentially replace bank guarantees (BG) in India. The Insurance Regulatory & Development Authority of India (IRDAI) permitted general insurers to issue Surety Insurance Bonds from April 2022. In December 2022, the first SB product was introduced by insurer Bajaj Allianz. In March 2023, New India Assurance, the largest non-life insurer, entered the surety bonds business. These developments are not just welcome but are critical for India's $1.5-trillion National Infrastructure Pipeline (NIP).

What is a surety bond? It is a legally binding contract entered into by the principal (contractor), the obligee (e.g. the National Highways Authority of India, or NHAI), and the surety (insurer) that underwrites the contractor's performance by providing monetary compensation to the obligee in case of contractor's failure to perform. However, there is a fundamental difference between SB and BG. While BG needs collateral, SB is like insurance and needs a premium. SB, therefore, does not lock in funds. However, unlike the usual insurance products, SB has the right to recover the claim from the principal.

BGs are needed throughout the project cycle—from bidding till completion of the defect liability period. Providing a BG is dependent on many things, such as the principal's overall borrowing limits and creditworthiness, the bank's risk limits, project cost, and risks, et al. The last 15 years' growth in India's Engineering, Procurement, and Construction (EPC) space necessitated contractors to borrow more and provide more BGs. Banks also ran up stressed assets, limiting their risk appetite, and seeking higher margin money. This effectively squeezed the contractors' growth. The most affected were the medium-sized contractors.

India plans to spend `115 trillion on infrastructure through the NIP over the next five years. A recent research paper published by The Infravision Foundation estimates that such an investment would need BGs that could go as high as `95 trillion. The banking system is unlikely to be able to provide BGs of this value, making critical an alternate instrument like SB to fill in the gap.

Globally, SBs are a $20-billion market, growing at about 6% CAGR, dominated by North America and Europe, with 75% share. They are extensively used to support infrastructure-building with laws that mandate their use. The US even has an SB Guarantee programme to help small, emerging contractors who lack the experience and financial strength to obtain commercial

BGs. In India, SBs were introduced over a year ago but have not taken off due to the daunting challenges related to adoption and scaling up, pricing, and recovery of claims.

The first challenge is the lack of awareness. While the NHAI has shown willingness to accept SB, many other agencies, including state governments, have not.

The second challenge is the lack of data. An insurance product needs actuarial pricing models, using historic customer data. In the case of the Indian SB market, insurance companies don't have enough data.

Lastly, there are major concerns over recovery in the case of claim. Insurance companies are not part of the Insolvency & Bankruptcy Code (IBC), and therefore may not get recourse to the project assets in the case of default.

Development of the SB market is extremely important as the system's inability to provide BGs can choke infrastructure development. The Infravision Foundation research presents a set of recommendations in this regard.

Awareness campaigns: awareness needs to be created among all the authorities by bringing them on the same page regarding the acceptance of SBs. The unique nature of SBs needs to be understood and factored into structuring, pricing, and capital guidelines.

Solvency ratios: Unlike standard insurance products, SB issuers enjoy access to project assets and cashflows in the event of a claim. The insolvency regulations for SB issuers need to take these into account.

Credit rating of surety bonds: Actuarial pricing models won't work in India due to a lack of data. Regulators could permit insurance companies to use the external credit rating of principals to assess the underwriting risk and the probability of default under the counter indemnity. These can be used to price the SB.

Indemnity agreement: SB issuers need indemnity agreements to recover money in case of a claim. Standard indemnity agreements should be made mandatory as part of the Sbs, wherein the principal unconditionally indemnifies the losses of the SB issuer. The government may also think of providing partial counter indemnity for MSMEs not having acceptable credit rating to back the indemnity. Alternatively, the SB issuers can be recognised as financial creditors under the IBC, removing the need for providing an explicit indemnity.

Right of subrogation and IBC: Effective implementation of SBs can be increased by providing the right of subrogation/substitution. That would allow the issuer to "step into the shoes of" the principal and use the contractual rights to recover the cost of making payment or performing on the principal's behalf.

Three things can be implemented immediately: awareness campaigns, indemnity agreements in standard SB, and permitting insurance companies to rely on external credit ratings for pricing.

The remaining action points will require broader engagement with multiple stakeholders. However, a roadmap for implementing these should be drawn up to ensure the SB market develops to its fullest extent. https://www.financialexpress.com/opinion/getting-surety-bonds-ready/3090316/

10. 'With many positives', India's growth to hold at 5.8% keeping top spot: UN *(newindianexpress.com)* 17 May 2023

The UN said on Tuesday that "with many positives", India's economic growth this year is expected to hold at 5.8 per cent, affirming a series of international organisations' projections that the country will be the fastest-growing major economy.

The Midyear Update to the UN's World Economic Situation and Prospects report projected next year's gross domestic Product (GDP) to hold at 6.7 per cent "supported by resilient domestic demand".

Speaking at the release of the report, the chief of the UN's Global Economic Monitoring Branch, Hamid Rashid, said that India continues to be "the bright spot" in the world economy with "many positives, including [that] the inflation has come down significantly" to about 5.5 per cent.

"This means that there'll be significant room for both fiscal expansion and monetary accommodation, so that will support domestic demand," he said.

However, he said that there were external risks. If the external financing conditioning deteriorates further and becomes much tighter, Rashid said, India would face some challenges, especially for exports.

As for India reaching even higher growth rates, he said it is "subject to quite a bit of uncertainty, especially in the external environment".

But he added, "We are pretty confident with our forecast right now for the year."

The report said that "financial conditions in the emerging economies with good credit ratings have generally remained relatively stable".

The International Monetary Fund (IMF) had last month projected India's GDP to grow at 5.9 per cent in the current fiscal while the World Bank (WB) pegged it at 6.3 per cent and the Asian Development Bank at 6.4 per cent, which is closer to India's Reserve Bank's 6.5 per cent.

But both the bigger international institutions cut the projections marginally from the earlier one - IMF by 0.2 per cent and the WB by 0.3 per cent. The latest UN report cut the overall growth projects by 0.1 per cent for all of South Asia to 4.7 per cent this year and 5.8 per cent next year.

Inflation for the region as a whole is projected by the UN to be 11 per cent, 1.9 per cent lower than last year, it said. The inflation rates for Pakistan and Sri Lanka are expected to be in the "double digits" due to the weakening of local currencies.

But India's inflation deceleration to 5.5 per cent would be the result as "global commodity prices moderate and slower currency appreciation reduces imported inflation", it said.

The report saw a sliver of silver lining in the global economy's growth prospects this year with an increase of 0.4 per cent from the January projection to 2.3 per cent, although the director of the Economic Analysis and Policy Division, Shantanu Mukherjee, warned that a "sombre" picture still holds.

He said that despite the increase, it is still below the average growth of 3.1 per cent in the two decades before the Covid pandemic and there is a risk of prolonged low growth. The report projected global growth to increase to 2.5 per cent.

The global picture is buoyed in part by the increase in projections for the three largest economies in the world, the United States, the European Union and China, according to the report.

China, which is the second fastest-growing economy, had its growth prospects raised from January by 0.5 per cent to 5.3 per cent following the lifting of the Covid restrictions which led to a recovery of consumer spending and investments, the report said.

The report's US growth projection was increased by 0.7 per cent to 1.1 per cent, and the European Union's by 0.7 per cent to 0.9 per cent.

The report said that capital flows to developing countries "recovered, albeit with significant volatility, reversing the decline in the first half of 2022".

"Global financial markets have remained largely resilient despite the ongoing banking turmoil in the United States and Europe," it said.

Although the regulators managed to contain the turmoil of the collapse of the Silicon Valley Bank and the Signature Bank and the government seizure of the First Republic Bank for sale to JPMorgan Chase in the US and the Swiss government-brokered takeover of Credit Suisse by UBS, the report said that the developments showed "the potential of more systematic financial stability risks". https://www.newindianexpress.com/business/2023/may/17/with-many-positives-indias-growth-to-hold-at-58-keeping-top-spot-un-2575978.html

11. GST probe into insurers widens, 10 more firms to get notices soon *(financialexpress.com)* May 17, 2023

A total tax evasion of Rs 2,500 crore has been detected of insurers by the DGGI till now, of which the firms have already paid close to Rs 750 crore on their own.

The goods and services tax department has widened the probe against insurance companies for alleged wrongful availment of input tax credit. The Director General of GST Intelligence is likely to serve show cause notices to 10 more insures soon, taking the number of firms under the drive to 30.

"Investigations into 20 insurers are complete and another 10 cases are under probe as of now. Depending on the findings, show cause notices will be sent to the latter too," said a person familiar with the development. The latest set of notices will be slapped on some of the prominent general insurance companies, the source added.

A total tax evasion of Rs 2,500 crore has been detected of insurers by the DGGI till now, of which the firms have already paid close to Rs 750 crore on their own. The investigations are being led by Mumbai, Meerut and Gurugram zonal offices of the DGGI.

The DGGI had launched a probe into insurance companies in 2022 after it found that some of these firms had wrongfully availed input tax credit on the basis of invoices issued by several intermediaries for providing services of advertising, marketing, brand activation even when no such services had actually been provided. In the absence of any underlying supply, the ITC was not permissible under the GST law.

This was done to circumvent IRDAI regulations that mandated only nominal commissions to corporate agents. The insurers obtained invoices from these intermediaries for supply of services of advertising, web marketing to transfer higher than permitted commission to NBFCs working as corporate agents.

The probe had till now unearthed such practices at private sector insurers till now.

While this has turned into an industry wide investigation, many insurers are understood to have also asked the GST department to refer the matter to the insurance regulator IRDAI. Officials however, are however of the view that since this is a taxation related issue, it has to remain within the domain of the Central Board of Indirect Taxes and Customs.

This is turning into an industry wide issue and both the GST as well as income tax department has launched investigations into these practices," noted the source, adding that it is expected that the new norms on commission by IRDAI will help curb this.

The new IRDAI rules, effective April 1, there is an overall cap on expenses of management of insurance companies. https://www.financialexpress.com/economy/gst-probe-into-insurers-widens-10-more-firms-to-get-notices-soon/3090237/

12. The missing piece in the National Logistics Policy is supply chain financing *(moneycontrol.com)* Updated - May 17, 2023

Besides emphasis on upgrading physical and digital infrastructure, a financial intermediary that performs working capital management for buyers and suppliers and smoothes their cash flow problems will complete the National Logistics Policy and help the logistics sector expand faster

India's logistics industry is poised for a brighter future, thanks to the National Logistics Policy launched in September last year. The policy promises to upgrade the physical and digital infrastructure of the logistics sector and improve service efficiency. However, there is a missing piece in the puzzle that could make all the difference for businesses: the financial infrastructure.

Businesses need capital to thrive. This can be either short-term capital or long-term capital. In financial parlance, short-term capital is also known more ubiquitously as working capital. And working capital is the amount of money that a business has available to fund its day-to-day operations.

Logistics And Financial Flows

In the world of logistics, this is what is most important, because, at the end of the day, one of the objectives of improved logistics infrastructure is also to reduce the working capital cycle (time taken to realise revenue from the delivery of goods) of the businesses involved in the supply chain. Without sufficient working capital, a business may struggle to pay its bills or may miss out on opportunities to grow and expand.

So, while logistics involves managing the physical flow of goods through the supply chain, what is also important is managing the financial flow of goods through the supply chain.

Supply Chain Financing (SCF) is a solution that allows businesses to access working capital by using their supply chain as collateral. With SCF, buyers can strengthen their supply chain by providing suppliers with immediate access to working capital at a lower cost through a financial institution or intermediary, while the intermediary earns a profit by providing the financing (at a minimal fee). The buyer can then pay the intermediary at a later, agreed-upon date.

Benefits Of Supply Chain Financing

The most obvious benefit would be the improved cash flow for both buyers and suppliers. By using SCF, businesses can receive payment for their invoices earlier or choose to pay their invoices later. This enables businesses to have more working capital available to fund their day-to-day operations, invest in growth opportunities, and meet their financial obligations.

A less obvious benefit would be increased resiliency of the supply chain. The better cash flow management that SCF affords companies will enable them to be more resilient in the face of supply chain disruptions. Post-COVID, as per a 2021 EY report on the working capital performance of companies, businesses in India saw an average increase of six days on their working capital cycles.

This effect was more pronounced in small and medium enterprises which saw an increase of 14 days. Since SCF provides access to working capital at a lower cost compared to other forms of financing (because the financing is secured by the buyer’s creditworthiness), it bolsters a business’s ability to satisfy its short-term financial obligations and endure disruptions.

When Physical, Digital & Fin Infra Meet

In recent years, there has been a growing awareness of the benefits of SCF among businesses in India. Many large corporations have started implementing SCF programmes to help their suppliers access working capital at a lower cost, which has helped to strengthen their supply chains and improve their financial performance.

Reserve Bank of India already has the regulatory framework (FRA 2011) and digital infrastructure (TReDS) necessary to bring about the integration of SCF into the National Logistics Policy (NLP). With the setting up of the Unified Logistics Interface Platform (ULIP) as part of the NLP, a common digital platform for all participants in the supply chain, this process has been made easier.

Integrating the TReDS with the ULIP will augment the physical infrastructure upgrades the NLP aims to bring about with a solid financial infrastructure as well. This would create a system in which one cannot just track the movement of goods but also has a greater chance of receiving earlier payment for them given that the risk of non-deliverance on the part of the supplier is now mitigated.

The Next Boost For Logistics

Moreover, financial intermediaries will now be more willing to provide that working capital to the supplier at a lower cost on the back of reduced risk and more supply chain visibility. And directing these flows through the UPI will only bolster the system.

Easing the process of financial flows to improve logistical / supply chain efficiency can also have positive spillover effects, for instance, in the payments ecosystem. In international trade, the Unified Payments Interface (UPI), which is already gaining global recognition, will become a more attractive option for companies wanting to source or export products from and to India.

The National Logistics Policy in India is a welcome and long overdue step towards upgrading the logistics sector. However, for businesses to truly benefit from these improvements, it is crucial for the Indian government to also address the issue of working capital management in the NLP.

Supply Chain Financing can provide a viable solution for businesses to access working capital at a lower cost, improve their cash flow, and reduce supply chain risks. By implementing SCF along with the NLP, businesses in India can not only survive but also thrive in a highly competitive and dynamic logistics landscape.

The increased competitiveness SCF can bring about by attracting more players will also improve economies of scale further reducing the cost of logistics. With these measures in place, India’s logistics industry can enable businesses to focus on growth and expansion while also facilitating the seamless movement of goods across the country. https://www.moneycontrol.com/news/opinion/the-missing-piece-in-the-national-logistics-policy-is-supply-chain-financing-10604971.html

13. Agriculture needs a 'natural' boost *(thehindubusinessline.com)* Updated - May 16, 2023

Policymakers have been striving hard to make Indian agriculture economically viable for long.

Though there is hardly any exit route available for Indian farmers, majority of them would like to quit agriculture, due to various structural reasons. Here are some policy options for agriculture :

Digitalisation of agriculture: Agri start-ups have been helping in putting the 'farmer first' in supplying seeds, fertilisers, pesticides directly through apps/call centres/channel partners, obtaining loans, buying crop insurance, and selling their produce at the best price. These new age ventures make the life of farmers easy through their 'full-stack' solutions, from 'seed to market'. Gurugram-based DeHaat caters to 15 lakh farmers covering over 35 crops, through artificial intelligence, machine learning, and data analytics. Typically, the farmers with smart phone can access digitalized agri-services for agri-inputs, farm advisory, and marketing of agri-produce.

I ntegrated/natural farming: Integrated/natural farming is recommended for some farmers who cultivate on uneconomic land holdings. If the farmer opts for integrated farming i.e., a couple of milch animals, backyard poultry, fish pond alongside vermi-culture for generating natural manure, he will be self-reliant and financially empowered. Family labour is the most important component of integrated farming, which makes it commercially viable and environmentally sustainable.

Climate smart agriculture: The government spends well over ₹1-lakh crore per annum towards fertiliser subsidy translating into approximately ₹7,000 per farmer. This led to indiscriminate use of fertilisers resulting in irreparable ecological damage, soil infertility, and a toxic food chain. Soil position in Punjab is unhealthy as 246 kg of fertilisers are used per hectare compared to the national average of 135 kg. Therefore, it is imperative to shift to eco-friendly agri-inputs such as Nano Urea which is cost-effective, ease in logistics, apart from enhancing crop yields substantially. In fact, a 500 ml bottle of Nano Urea (invented by Ramesh Ralia and manufactured by IFFCO) costs around ₹240 and it can replace a 45 kg bag of urea, that costs around ₹3,000 in the open market.

Adopting best farm-practices: Though Israel does not have conducive climate for cultivation of agriculture, water resources, and more than half of its land area is desert, it is a major exporter of farm-produce and a global leader in agricultural technologies including Internet of Things. Agriculture in Israel is based on co-operative principles that are practised mainly by two farming communities namely Kibbutz and Moshav who follow social equality, co-operation and mutual aid in generating agricultural output in the most productive manner.

Say 'no' to informal credit: A recent field survey in 5 States (Telangana, Karnataka, Odisha, Uttar Pradesh and West Bengal) shows that money lenders/traders/landlords, still exist in rural India despite the availability of formal sources of finance from banks/financial institutions (NIRDPR, 2022). So besides easing access to formal credit, farmers need to be counselled on financial prudence.

Leveraging Collectives: Convergence of SHGs, Farmers Producer Organisations (FPOs) and Co-operatives will lead to better bargaining power of farmers in terms of bulk procurement of inputs at a discounted price, economies of scale in transportation and warehousing, access to low cost institutional finance, farm mechanisation (drones for monitoring of crops and spraying of fertilisers and plant protection chemicals, etc.), aggregation in selling of agri-produce at remunerative prices. The government allocated ₹6,866 crore for promotion of 10,000 FPOs till FY2028. However, majority of the FPOs are not able to access these funds due to their inadequate capital base, lack of awareness, and non-compliance with the guidelines.

Development of agri-value chains: Key drivers of agri-value chains are customer focus, infrastructure, technology, training & capacity building. VAPCOL, a multi-state farmer producer company based in Maharashtra, is a case in point. It has a membership of 55 FPOs covering over 40,000 tribal farmers spread across seven States.

Development of agri-export clusters may be encouraged besides managing the risks of monsoon and market. https://www.thehindubusinessline.com/opinion/agriculture-needs-a-natural-boost/article66858355.ece

14. Why climate change poses a significant challenge for banks *(economictimes.indiatimes.com)* May 16, 2023

'Failure to mitigate climate change', 'failure of climate change adaptation', 'natural disasters and extreme weather events', and 'biodiversity loss and ecosystem collapse' are the four biggest risks facing the world for the next ten years as per the World Economic Forum's Global Risks Report 2023. In fact, 'Natural disasters and extreme weather events' is also the second-most severe risk that the world faces in the next two years.

India is no stranger to climate disasters, from the catastrophic floods in Kerala and Assam to the devastating cyclones in Odisha and West Bengal. These events not only take a massive toll on human lives and the environment but also have significant financial implications, with billions of dollars in damages and economic losses.

In fact, according to the UK charity organisation Christian Aid, in 2022 there were 10 climate-fueled extreme weather events globally that caused more than US$ 3 billion of damage each. The irony is that while the material cost of these natural disasters and extreme weather events is higher in developed countries, the cost of human suffering in terms of death and injuries is higher in poorer nations.

As we continue to grapple with the effects of climate change, it is becoming increasingly clear that banks and financial institutions cannot ignore the risks posed by these events. In fact, banks can play a crucial role in mitigating these risks by factoring in climate change when making lending decisions.

Types of Risks Posed by Climate Change
Climate change poses various risks for banks, including physical risks, transition risks, and liability risks.

- Physical risks are those arising from the increasing frequency and severity of climate-related events, such as floods, hurricanes, and wildfires, which can damage or destroy physical assets, disrupt supply chains, and impact the creditworthiness of borrowers. For example, if a bank has lent to a business that is located in an area prone to flooding, the business may suffer losses, making it more difficult for it to repay the loan. Another example would be the adverse impact on bank lending to farmers caused by changes in climate patterns such as El Niño and La Niña.

- Transition risks refer to the financial risks that may arise from the transition to a low-carbon economy. These include policy and legal risks, market risks, and reputational risks. For instance, if a bank has helped bankroll investments in enhancing fossil fuel capacity, the shift to cleaner energy sources may result in these investments losing value over time, thereby affecting the bank's financial health.

- Banks can face Liability risks if they do not disclose, address, and manage the effects of climate change sufficiently. It is important for banks to assess and provide detailed information about their exposure to climate risk to customers, shareholders and other stakeholders. For example, banks can be sued for contributing to climate change by financing businesses that have significant greenhouse emissions. These risks are interconnected and complex, making it challenging for banks to quantify and manage them effectively.

Challenges in assessing the risks created by climate change

In January 2022, the Reserve Bank of India (RBI) conducted a survey of 34 scheduled commercial banks on ‘Climate Risk and Sustainable Finance’ to evaluate their readiness to tackle climate change risks. The survey revealed that 4 out of 12 public sector banks and 7 out of 16 private sector banks had yet to consider climate risks as a material threat.

A few public sector banks mentioned that they had incorporated physical and transition risks into their Internal Capital Adequacy Assessment Process (ICAAP), but had not yet included climate-related risks into their broader risk management framework. This is perhaps because identifying, assessing, managing, monitoring, and mitigating climatechange risk is by no means a straightforward exercise.

One of the biggest challenges in assessing climate risks is the lack of standardisation and consistency in data collection and analysis. Climate change risk data is often incomplete, unstructured, and scattered across different sources, making it difficult for banks to collect, analyse and interpret it.

Banks also face the challenge of incorporating different scenarios and time horizons into their risk models, as climate change impacts are uncertain and can manifest over long periods of time. It should be noted that climate change is usually forward-looking and existing risk assessment frameworks may be backward-looking since they rely on consistent historical data. This adds to the difficulty.

Another challenge is the dynamic and interconnected nature of climate change risks. Climate change can impact several areas of a bank's operations, including credit risk, market risk, operational risk, and reputational risk.

Developing risk models encompassing these complex 5/17/23, 2:58 PM OPINION: Why climate change poses a significant challenge for banks, and interconnected risks is not an easy task. Risk Management is as much an art as it is a science. Incorporating climate change risk into a bank's risk framework requires a cultural shift in banks along with detailed training and development initiatives.

Regulatory Framework
There are several regulatory frameworks and guidelines by international bodies that help banks factor in climate change as a risk.

- The Task Force on Climate-related Financial Disclosures (TCFD), which was established by the Financial Stability Board (FSB) in 2015. The TCFD has developed a framework that provides guidance to companies and financial institutions on how to disclose climate-related risks and opportunities in their financial filings.

- Another example is the Network for Greening the Financial System (NGFS), which is a group of central banks and supervisors that collaborate on developing tools and methodologies for managing climate-related risks in the financial sector. The NGFS has developed several reports and guidelines, including the "Guide for Supervisors: Integrating climate-related and environmental risks into prudential supervision" and the "NGFS Climate Scenarios for central banks and supervisors."

- The Basel Committee on Banking Supervision has also issued a report on climate-related risk management and supervisory issues for banks.

- The Principles for Responsible Banking, developed by the United Nations Environment Programme Finance Initiative, also provide a framework for banks to align their lending decisions with the goals of the Paris Agreement.

- RBI announced in February 2023 that it will soon be releasing regulatory initiatives on climate risk and sustainable finance, particularly related to green deposits, disclosure framework on climate-related financial risks, and climate scenario analysis and stress testing. Intensive efforts are on to overcome the challenges related to quantifying climate change risks through the use of Big Data, Artificial Intelligence, and Predictive Analytics. In the meanwhile, the easiest way for banks to mitigate climate change risk would be to incorporate Environmental, Social, and Governance (ESG) factors into risk assessments to mitigate climate risk while lending. This will help in the following ways:

- ESG integration enables banks to evaluate the potential environmental and social impacts of a borrower's activities, identifying and managing risks associated with climate change.

For instance, a bank can assess a company's carbon footprint and determine whether the company is making efforts to reduce it.

- ESG can provide banks with more comprehensive and accurate data for risk assessments, which helps in making informed lending decisions. In fact, the Securities and Exchange Board of India (SEBI) has mandated that the top 1,000 companies by market capitalisation in India have to file ESG reports under Business Reporting and Sustainability Reporting (BRSR) from FY 2023. The reports contain a wealth of information that banks can incorporate into their risk assessment frameworks.

- Integrating ESG factors into risk assessments can help banks track regulatory actions and potential reputational risks associated with capital-intensive and environmentally sensitive projects in mining, power generation, oil refining, infrastructure, etc. The increasing scale and frequency of climate-change-induced natural disasters and extreme weather events leave no room for doubt that climate change risks will need to be factored into the risk assessment frameworks of banks and financial institutions. They will have to adopt a proactive approach to managing climate risks. It will enable them to not only mitigate these risks but also take advantage of the opportunities presented by the transition to a low-carbon economy. https://energy.economictimes.indiatimes.com/news/renewable/opinion-why-climate-change-poses-a-significant-challenge-for-banks/100276421

15. Can India capitalise on the opportunity being provided by the Demographic dividend – Part – I *(timesofindia.indiatimes.com)* May 16, 2023

Social scientists have long argued over the impact of growth in population on economic growth of a country. The debate has oscillated from;

-The Pessimistic View, which argued that population growth restricts economic development, the view being mainly credited to Thomas Robert Malthus.
-The Optimistic View, which argued that population growth fuels economic growth, the view being credited to Simon Kuznets.

-The debate seemed to have finally settled in favour of the Neutralist View, that population growth does not matter for growth prospects of the economy.

Bloom and Williamson in 1998 had argued that the earlier debate missed a critical dimension of the population dynamics, namely, the changing age structure. According to them, as countries pass through various phases of demographic transition, from high fertility and high mortality to low fertility and low mortality, the age composition of a country's population changes. During this demographic transition, all countries are said to have a demographic window of opportunity when the growth in the working-age population is greater than the growth in the total population. This increase in the working-age population or increase in the share of the working-age population in total population is referred to as the demographic dividend.

Report of UNFPA

The UNFPA (United Nations Population Fund) has pointed out in its recent report that India may receive Demographic Dividend because of its increasing working age population. It noted that 30 % of India's population is below 14 years of age, with the working age population (15-59 years) constituting another 62 %, only 8 % of its people being 60 years or older.

UNFPA estimates that India's working age population will reach a maximum of 65 % by 2030 and then start declining thereafter. According to it, the country's demographic dividend will be available for five decades from 2005 to 2055, longer than any other country of the world. By June 2023, India is expected to overtake China as the world's most populous country.

India's median population age is now 28 compared to China's 37. UNFPA in its report has drawn attention to the significant demographic dividend India is expected to enjoy over the next several decades, increasing her economic growth potential.

It is pointed out in this connection, if India's growing working age population can find productive employment with reasonably decent incomes, the country will benefit significantly from the demographic dividend, which in turn would propel her economic and social development.

Potential Benefits of the Demographic Dividend

-The benefits of having an age structure with more working age people and lesser dependents works through many mechanisms:

-A larger share of people who are productive and able to contribute positively to the economy can be beneficial for economic growth;

-Lower fertility rates and longer lives create conditions for greater female empowerment as they find more time to break away from their traditional roles within the household, and seek to join the labour force;

-Empowered women are more likely to educate, spend resources on the health of their children, contributing to the building human capital;

An important benefit of the demographic dividend manifests itself in an increase in the savings rate. In the condition of a demographic dividend, an economy will save even more, because there will be fewer number of dependents. The resources which otherwise would have been consumed by the dependents, can instead be saved now.

Capitalising on the Demographic Dividend

According to experts, all the above-mentioned mechanisms provide an opportunity for growth. They have identified a few variables namely, health, family planning, education, and adoption of conducive economic policies, which must be prioritised to make good use of the demographic dividend. https://timesofindia.indiatimes.com/blogs/truth-lies-and-politics/can-india-capitalise-on-the-opportunity-being-provided-by-the-demographic-dividend-part-i/

16. Can India capitalise on the opportunity being provided by the Demographic dividend - Part – II *(timesofindia.indiatimes.com)* May 17, 2023

India entered the demographic dividend phase around 2010 when the share of the working-age population was about 51 %. India is expected to continue to enjoy the benefit till 2056 with the ratio projected to be 54 % then. It is said, globally, between 2021 and 2052, India is expected to have the highest share in terms of working-age population. Population wise by June 2023, the country is expected to overtake China as the world's most populous country.

The rise in the working-age population will provide India with an abundant supply of labour, which will have a bearing on investment and production capacities. Domestic output will witness healthy growth, if the excess labour force is absorbed in productive sectors, it is opined.

To reap gains from India's demographic dividend, apart from flexible labour market policies, appropriate macroeconomic and financial reforms are needed to encourage savings and efficient allocation of capital, it has been opined in this connection.

Factors in favour of India

Experts mention following factors in favour of India helping her during this period:

-India's democracy is firmly entrenched;
-It is now the world's fastest growing economy,
-Comfortable Foreign direct investment inflow;
-Major Multinational Companies seeking growth, eyeing India as a favoured destination.

Untapped Potential

It is pointed out that despite these positive signs, India's record in creating jobs since 2000 has been dismal.

During the 1970s and 1980s, annual GDP growth rate was around 3-4 % which contributed about 2 % to the annual employment growth.

In the 2000s, GDP growth nearly doubled, at around 6-7 %, but employment growth declined by half to 1 % or less.

During the post-2000 period, the relationship between GDP and job growth has become progressively weaker.

According to experts, a plethora of reasons are contributing to India's jobless growth. Of its estimated 480 million working age people, reportedly 30 million cannot get jobs, which is compounded by two factors:

-10 to 12 million young people are entering the job market each year; while,
-Millions of existing jobs are disappearing each year.

This has especially affected women who have lost millions of jobs. According to ILO and World Bank data, while the percentage of women in the workforce increased in most Asian countries, it declined from 27.7 % in 1990 to 24.4 % in 2018 in India.

Current problems faced on the Job front

-Currently, 90 % of India's demand for labour comes from informal sectors, such as agriculture, construction, tourism, and other low-paid services and trades. Only 2.3 % of this labour is said to have undergone formal training;

-There is a mismatch of jobs available and the skills of jobseekers;

-Even after graduation, jobseekers lack basic work and communication skills, it is pointed out;

-Many entry-level jobs are being automated with robots and artificial intelligence tools. This is also the case for repetitive manufacturing jobs. Such trends are likely to accelerate in the future, reducing the country's employment generation capacity, it is pointed out.

Areas needed to be addressed on priority to maximise the gain from demographic dividend:

-The biggest challenge and the critical factor in harnessing the demographic dividend is providing productive employment to the increasing labour force;

-Demographic transition starts with improvements in public health which includes, lowering the infant mortality rate, improving maternal and general health, and improving sanitation, leading to the extension of the quality and length of life. A resulting drop in mortality will speed up the mechanisms of demographic transition, necessary to cause a change in the age structures.

-Building human capital is essential, and having a young population is not enough, until they have certain skills to contribute effectively to the economy. Education is very important to build up the human capital so that a skilled workforce is present, which can innovate and promote faster growth.

Measures taken by the government to benefit from the Demographic Dividend

The government has already rolled out policies and schemes for boosting skills among the youth, entrepreneurship, etc. However, to make India Self-Reliant, effective implementation is necessary to help the domestic manufacturing and services sectors absorb the excess labour force. Also, substantial investment in higher education and research and development would be required to enhance the skills of the large cohort entering the labour market in the next three decades.

In fine, aggressive forward-looking policies along with technology push are thus imperative to take advantage of the demographic dividend India is predicted to enjoy. https://timesofindia.indiatimes.com/blogs/truth-lies-and-politics/can-india-capitalise-on-the-opportunity-being-provided-by-the-demographic-dividend-part-ii/