

# THE CATALYSTS

... in pursuit of Good Governance



**Comptroller and Auditor General of India**

2021









सत्यमेव जयते

# A compendium of New Initiatives and Good Practices in the CAG's organisation



Office of the Comptroller and Auditor  
General of India

2021



# Foreword

I am happy to present the first compendium of 'New Initiatives and Good Practices' of the CAG's Organisation to all our esteemed stakeholders.

A lot of good work done by our organisation is regularly presented through audit reports and other products. Often the interface with stakeholders ends there. This compendium provides a forum to further showcase the new initiatives and good practices in the organisation during the last few years.

Several aspects of our functioning such as new strides in auditing, effective use of technology tools, business process re-engineering in auditing and accounting, instituting data led audits, engaging actively with stakeholders, leadership role in International public sector audit and staff welfare initiatives have been collated and presented in this compendium. Through this compendium, we hope to connect with our stakeholders and present the dynamism and zeal of our personnel who have consistently endeavored to meet the challenges of the complex and evolving environment.

We have aptly titled these initiatives and the people behind them as 'The Catalysts- In pursuit of Good Governance'. I congratulate all the teams and contributors behind these initiatives and good practices.

I am aware that there are many more such initiatives which could not find a place in this first edition. We intend to publish this collection at periodic intervals and hope to bring them to the fore in future.

I hope that the initiatives and the good practices in the CAG's organisation and our future efforts will further our mission of promoting accountability, transparency and good governance.



(GIRISH CHANDRA MURMU)  
**Comptroller & Auditor General of India**



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## **Technology tools for audit planning, evidence gathering and reporting**

**Pursuit of advanced tools which improve audit efficiency and effectiveness in a technology-driven environment has been given high priority in the CAG's organisation.**

**Use of such tools has expanded the repertoire of audit techniques.**

**The cases mentioned in this section, have been carried out with assistance from reputed institutions, experts and audited entities.**



Scan to access  
Guidance on GIS  
and RS in Audit

# Use of remote sensing and GIS in storm water management

Bengaluru city faces a paradoxical situation - urban flooding on one hand and water scarcity, on the other. The Indian Institute of Science, Bengaluru, in its 2016 study, had indicated that 73% of Bengaluru's water demand can be met out of rainwater if measures such as rejuvenation of lakes, re-establishing interconnectivity between water bodies, treatment of sewage generated in households, rainwater harvesting, etc., are implemented in right earnest.



Scan to access the report

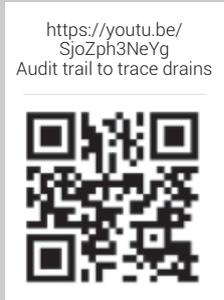
The **Office of the Principal Accountant General (Audit-I), Karnataka**, took up the performance audit of Management of Storm Water in Bengaluru Urban Area to understand whether better storm water management could simultaneously tackle the twin challenges of urban flooding and water scarcity. Frequent floods destroy roads, public property and cause traffic congestion. One of the main causes of flooding is inadequacies in management of storm water drains. Hence, there was a need for a thorough examination into the design, agility/adaptability of the infrastructure for the management of storm water and other relevant issues.

This audit needed analysis of storm water infrastructure maps over a period of time. The absence of complete maps with various authorities led the audit office to identify satellite imagery as a viable option and they collaborated with Regional Remote Sensing Centre, Indian Space Research Organisation, Bengaluru for technical assistance.

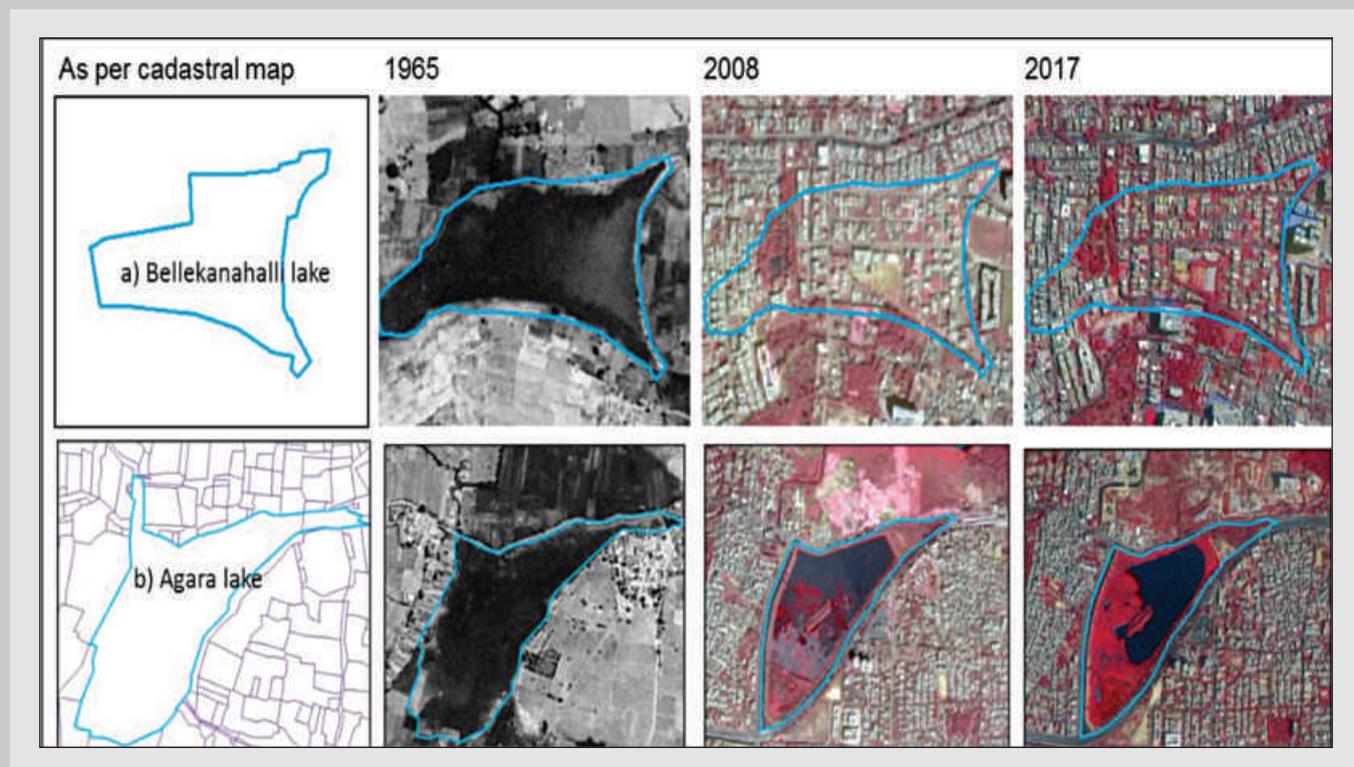
The office team utilised time-series satellite imagery and geospatial analysis tools like ArcGIS software (a cloud-based software to create and share interactive web maps) to clearly visualise and analyse very large areas of the city. Audit personnel were trained in geospatial image analysis and the Regional Remote Sensing Centre helped with access to satellite imagery and allied technology.



As part of audit evidence, multiple thematic layers such as building footprints, road network, lakes, drainage network and sewer lines in vector format and cadastral maps (maps identifying land parcels, depicting areas, providing description of land), spanning about 50 years, were analysed. Subsequently, joint physical inspections at some of these sites, by members of the audit team and officials from the audited entities, were conducted and recorded. The audit report includes QR codes of a few such videos.



Time Series maps were used effectively to depict changes in lakes, drainage and land use between 1965 and 2017. (picture below depicts shrinking water bodies over the years)



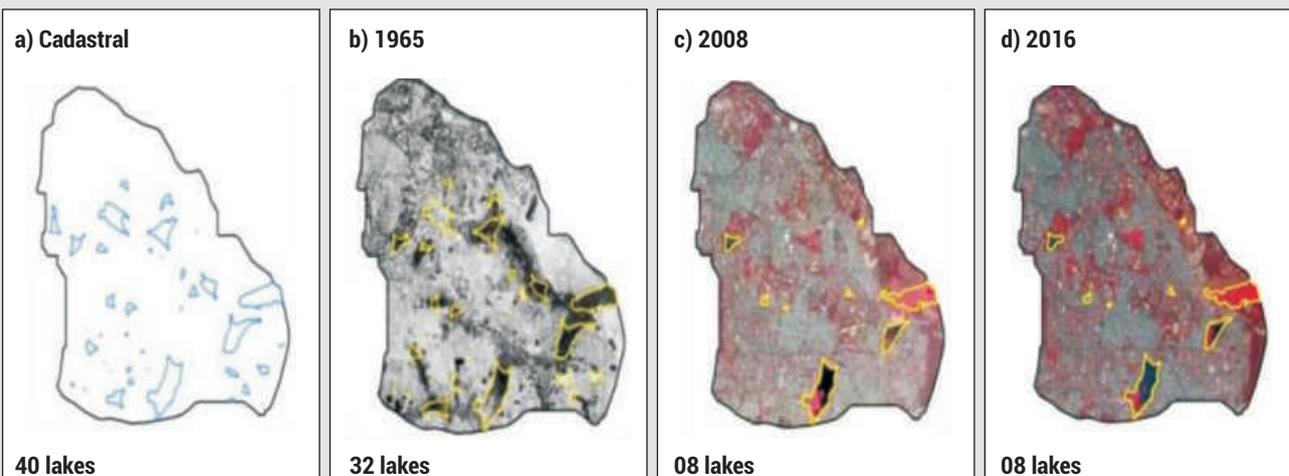
Audit analysis also pointed out that Bengaluru witnessed large scale encroachment of lakes/drains and depletion of natural drainage systems. The changes in land use, such as decrease in vegetation cover and open spaces and increase in the built-up area resulted in loss of inter-connectivity between water bodies impacting effective recharge of ground water and increase in runoff of storm water.

Some of the audit observations, supported by satellite imagery data, are highlighted below.

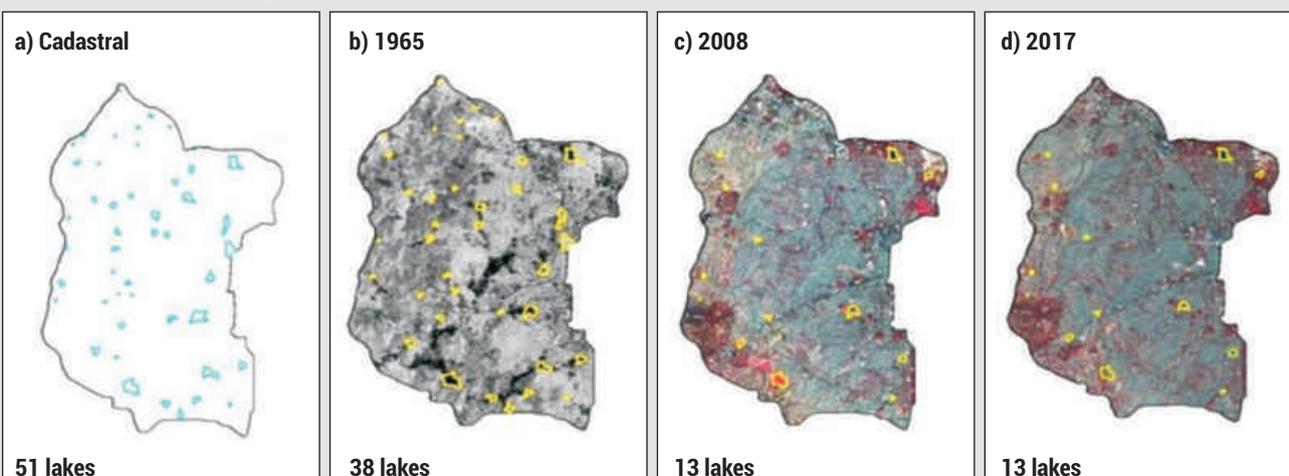
- a) Reduction in the extent of water bodies in Bengaluru – There were 41 and 51 water bodies existing in Koramangala and Vrishabhavathi valleys respectively as per the cadastral map (prepared through field survey during the early 1900s), which got reduced to 8 and 13 by the year 2008 (picture below) indicating the severity of lake conversion. Further, the wetland system (lakes, tanks, kere and katte), which contributed about 479.48 ha (0.75%) and 215.46 ha (2.24%) to the geographical area of the valleys as per the cadastral map decreased to 262.37 ha and 62.05 ha during 2016/2017 indicating erosion due to land use changes.

### Time-series maps showing decreasing numbers of lakes / tanks; Cadastral maps pertain to 1900s

#### Koramangala valley



#### Vrishabhavathi valley



- b) Reduction in length of drains – The total length of drains (primary and secondary) as per cadastral maps was 113.24 km and 226.29 km in Koramangala and Vrishabhavathi valleys respectively, which was reduced to 62.84 km and 111.72 km by 2016/2017 (picture opposite).

## Time series drainage maps showing reduction in length of drains Koramangala valley

### Koramangala valley

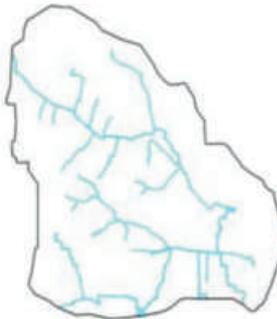
a) Cadastral drains



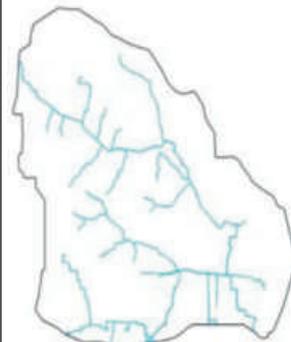
b) 1965 drains



c) 2008 drains



d) 2016 drains

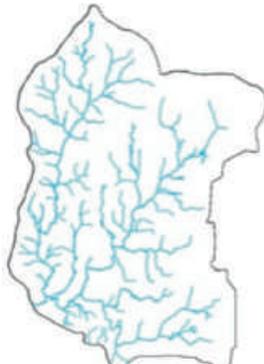


### Vrishabhavathi valley

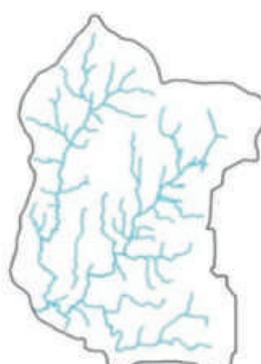
a) Cadastral



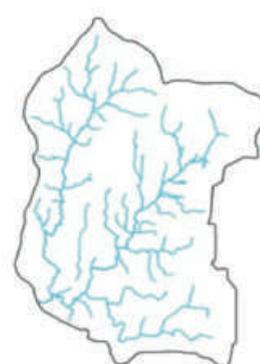
b) 1965



c) 2008



d) 2017



### Impact

The audited entity immediately initiated the following actions:

- Reconciliation of databases between Bangalore Development Authority and the City's municipal corporation, the Bruhat Bengaluru Mahanagara Palike.
- Entrusting the maintenance of storm water drains on annual contract
- Insisting on 'as built drawings' and 'completions plans' and preservation thereof.

# Use of Unmanned Aerial Vehicles in detecting illegal sand mining

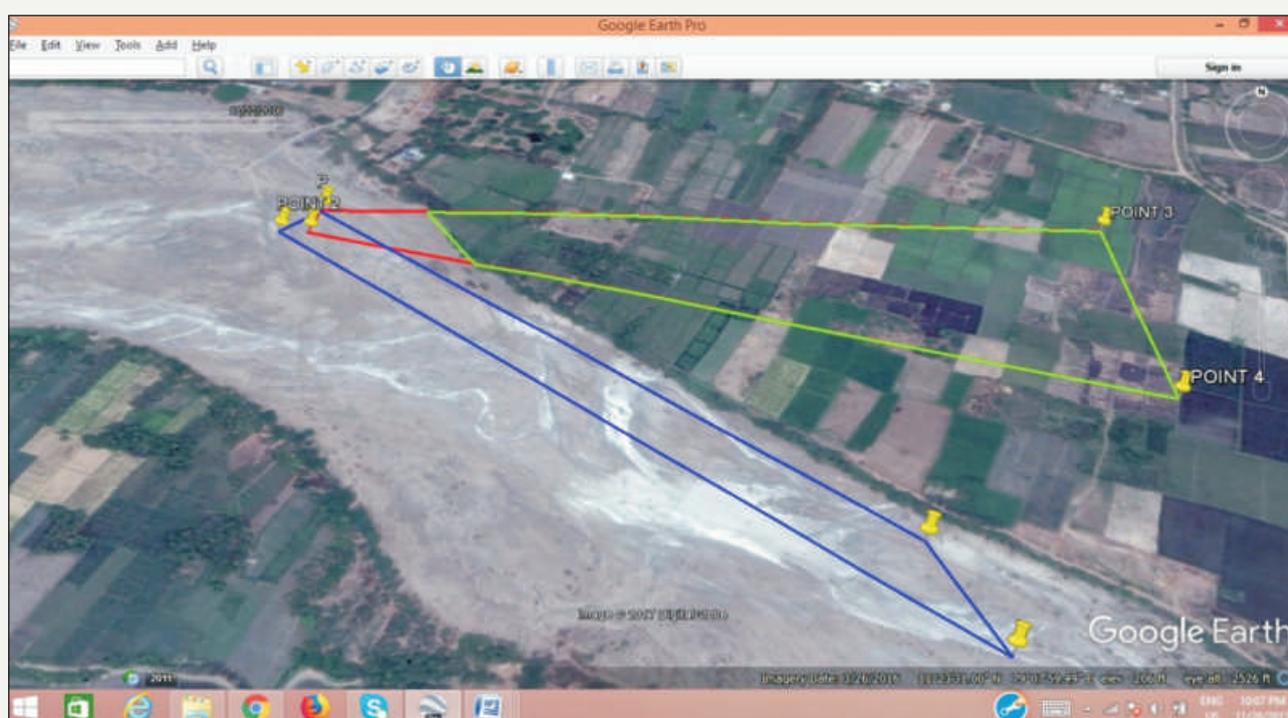
The Office of the Accountant General (Audit)-II, Tamil Nadu, used Unmanned Aerial Vehicle (UAV) based mapping technology for quantifying the extent of area and volume of mining of sand and brought out significant findings, including observations on illegal mining. Fixed Wing UAV (High-resolution camera mounted), Quad copter and Multi-frequency DGPS receivers were used for survey of the entire study area.

The audit team observed discrepancies between Geo co-ordinates of mines reported in the approved mining plans and environmental clearances



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## Geo co-ordinates in Mining Plan and Environmental Clearance

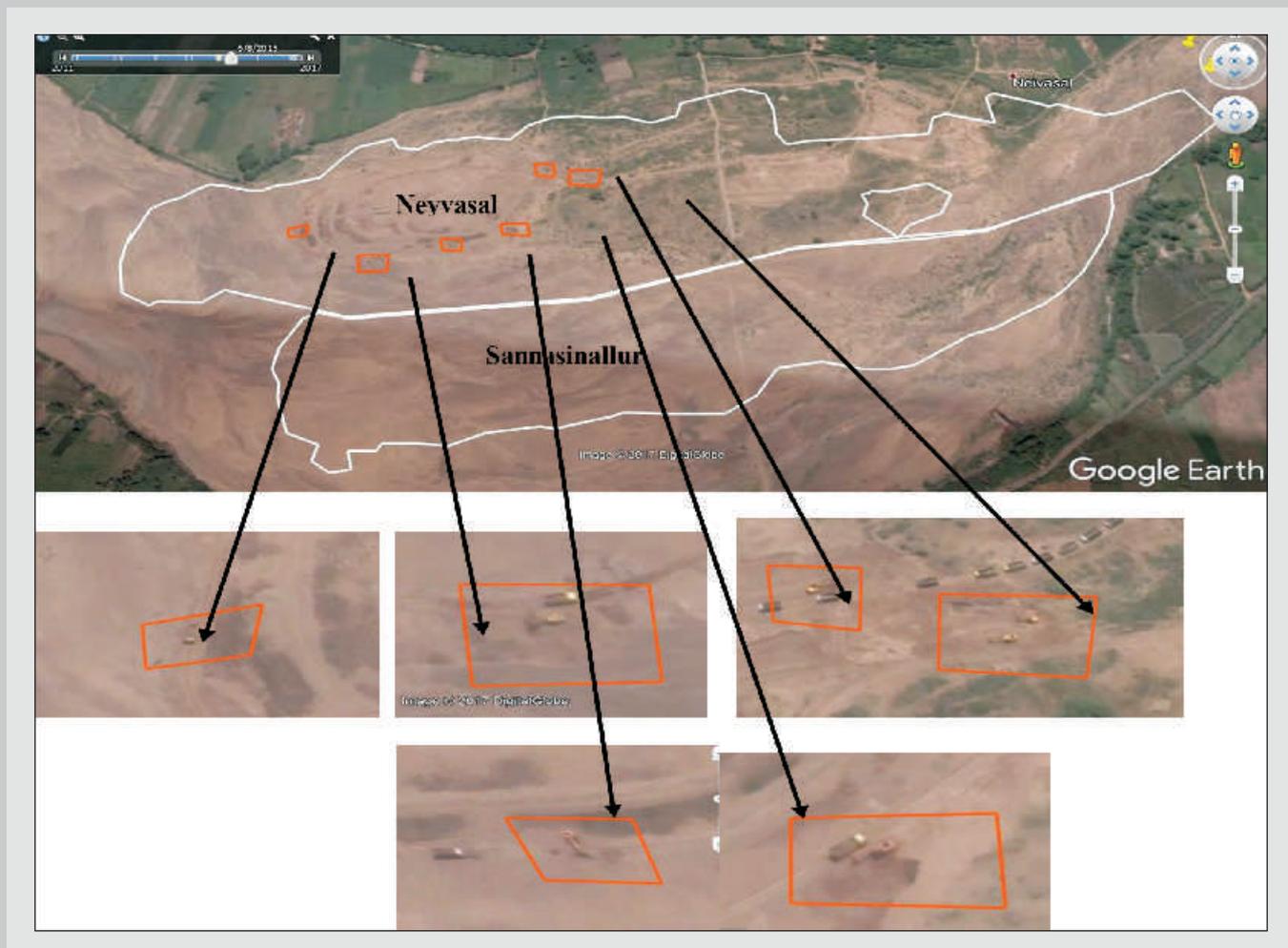


Blue polygon indicated area for quarrying as per geo co-ordinates in mining plan  
Green and Red polygon indicated area of quarrying as per geo co-ordinates in the Environmental Clearance

The area as per Geo co-ordinates in respect of which environmental clearance had been given represented private patta lands (indicating incorrect basis for granting environmental clearance).

The audit office analysed mining operations in Neyvasal village of Cuddalore District in the State. The Vellar river flows through Neyvasal village and Sannasinallur village of Ariyalur District. The sand quarry license for the quarry was approved by the District Collector for an area of 19 ha, at not more than 1 metre from the bed level and utilisation of 2 excavators (mentioned as poclains in the audit report) was permitted in the quarry.

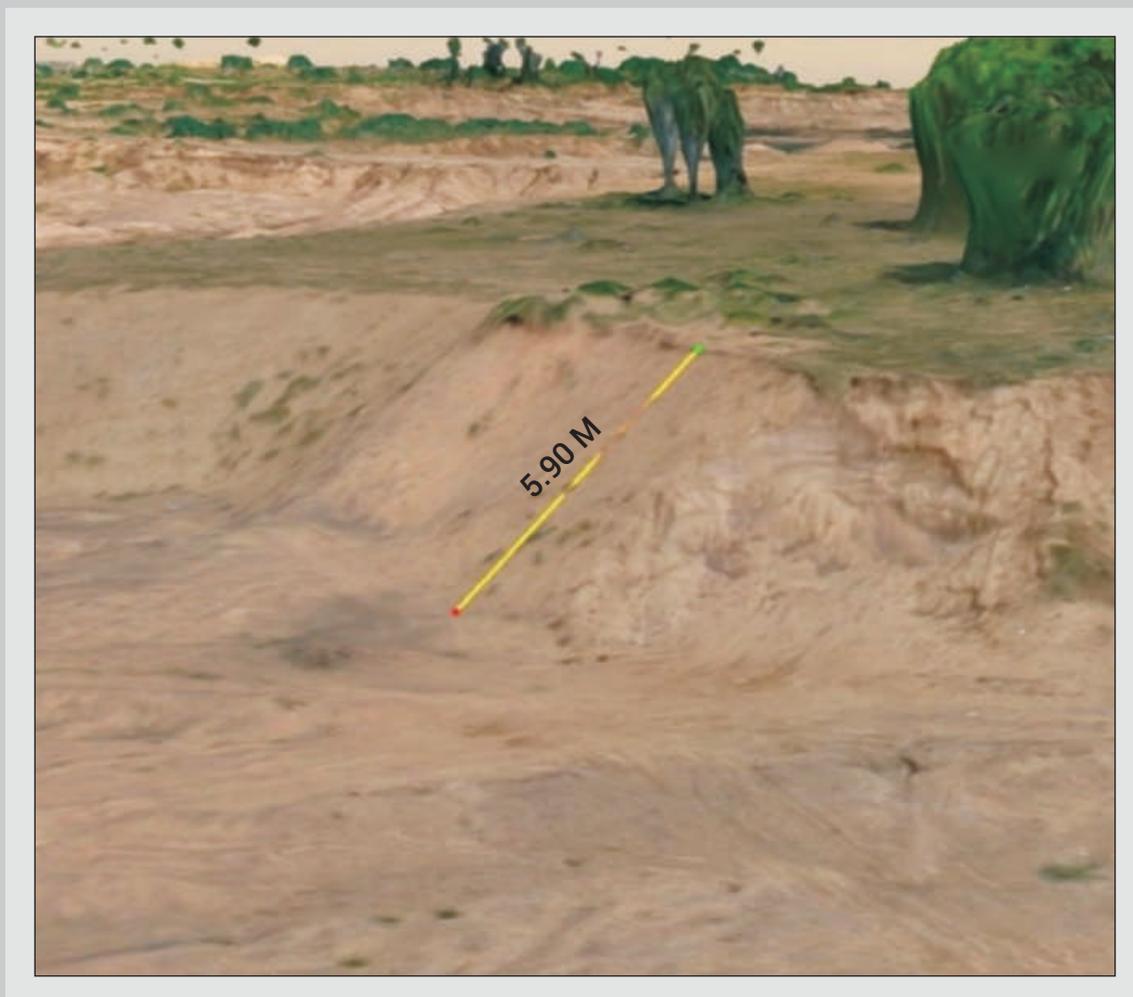
The office analysed vehicular movement and the presence of equipment, using Google Earth Map, and noticed that 4 to 7 excavators were used on 3 occasions in deviation of the orders. The picture below shows operation of seven excavators (poclains), against 2 permitted in Neyvasal quarry on a particular date.



The actual area of sand mining including the depth of mining in the Vellar river of Neyvasal sand quarry and adjacent areas was observed through UAV images. The data received from the UAV images were processed and the actual volume of sand mined from the area was calculated using different software models. Mining was undertaken in area measuring 42.37 ha in Neyvasal quarry and 26.44 ha in adjacent Sannasinallur village in the Vellar river, as against the approved area of 19 ha. In case of the latter, no sand quarrying operation was permitted by the Authorities, after 2011. However, the google map of the Sannasinallur village in Vellar river and the UAV mapping of the area showed that sand mining was carried out in areas of Sannasinallur village without an approved mining permit.

The audit team was able to comment on the depth of sand quarrying undertaken, which was more than the permitted depth of 1.00 m, with the actual depth going to a maximum of 6.5 m (picture below).

### 3D image showing height difference 5.90 m



The audit report also commented upon the total volume of sand excavated which worked out to 13.34 lakh cum as against the permitted quantity of 1.90 lakh cum. The value of additional quantity of 11.44 lakh cum of sand, worked out based on stockyard rate applicable was ₹ 62.66 crore. The penalty leviable for transportation of the additional quantity of sand without valid transport permits worked out to ₹ 505.30 crore.

Going beyond traditional audit techniques, several aspects of mining operations were conclusively commented upon in the audit report.

# Use of Unmanned Aerial Vehicles in detecting illegal quarrying

The Office of the Principal Accountant General (Audit-II), Karnataka, used satellite images i.e. the image of the topography of Chikkaballapura Taluk, to study the quarrying activities in the Taluk.

The Office of the Senior Geologist, Chikkaballapura (Office) furnished the GPS co-ordinates of the 292 quarry leases in Chikkaballapura and the same were given to the consultant (Indian Institute of Science, Bengaluru) for imposing the GPS co-ordinates over the topography of Chikkaballapura Taluk. Areas other than those covered by the GPS co-ordinates furnished by the State Government Office were identified as unauthorised quarry sites as these areas were not granted as leases by the Mining department.

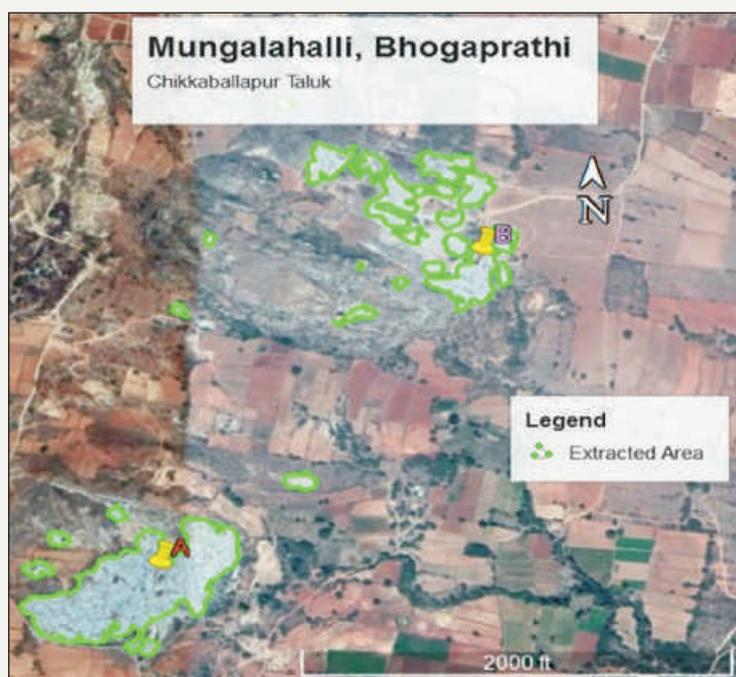
Such unauthorised quarrying sites were identified in 532 locations over 11.45 lakh square metre. The volume of minerals extracted was estimated at 11.12 crore metric tonnes. As against this, the Department had during the period 2008-18, detected illegal mining activities in only 63 locations.

The satellite images also depicted quarrying in the areas adjacent to quarry leases. The quarrying beyond the lease area extended over 8.90 lakh square meters (89 ha) in 146 locations and the quantity extracted was estimated as 27.68 crore metric tonnes.



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## Satellite image of illegal quarrying sites (A,B) at Mungalahalli village, Chikkaballapur Taluk



As a follow-up to audit, State Government conducted a drone survey in 25 out of 31 districts, covering 2,559 mining leases in 646 villages. The mineral extracted was quantified duly bifurcating the leased boundary fixed for the leased area. It was observed, based on the survey, that the quantity of mineral extracted within and outside the lease area was 16.49 crore MT and 5.43 crore MT, respectively. The Government of Karnataka decided (September 2020) to conduct drone survey in the presence of quarry lease owners for quantifying the amount of minerals despatched without permits and allotted budget for the same during 2020-21.

# Use of Remote Sensing and GIS in detecting encroachments and land use land cover changes in National Parks and Wildlife Sanctuaries

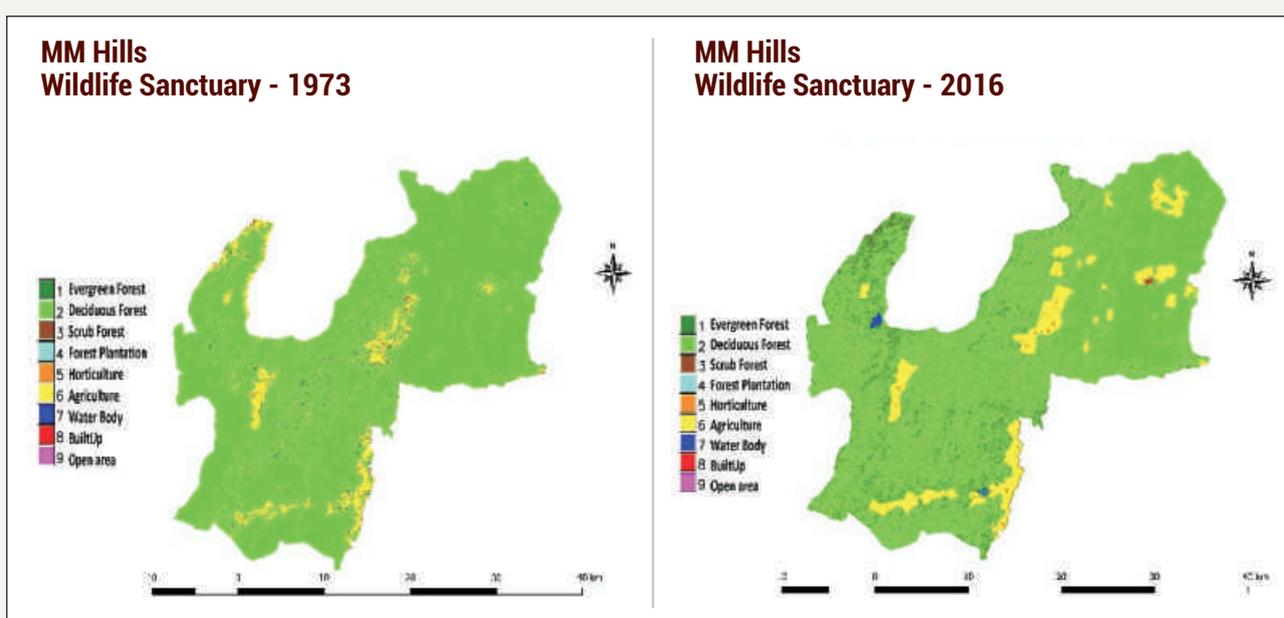
The Office of the Accountant General (Audit)-I, Karnataka, conducted a performance audit on "Administration of National Parks and Wildlife Sanctuaries in Karnataka" by focusing on 14 sampled National Parks and Wildlife Sanctuaries of Western Ghat Nilgiri Biosphere Reserve region to assess the impact of intrusive activities and study efforts in minimising the same. The office obtained maps and satellite imageries from Karnataka Forest Department, Karnataka State Remote Sensing Applications Centre and National Remote Sensing Centre. These were analysed, with the help of Indian Institute of Science, to assess land use analysis in and around the sample protected areas and encroachments in them.



Scan to access the report

Changes in Land Use Land Cover (LULC) were evidenced in the Report (pictures below) using satellite data.

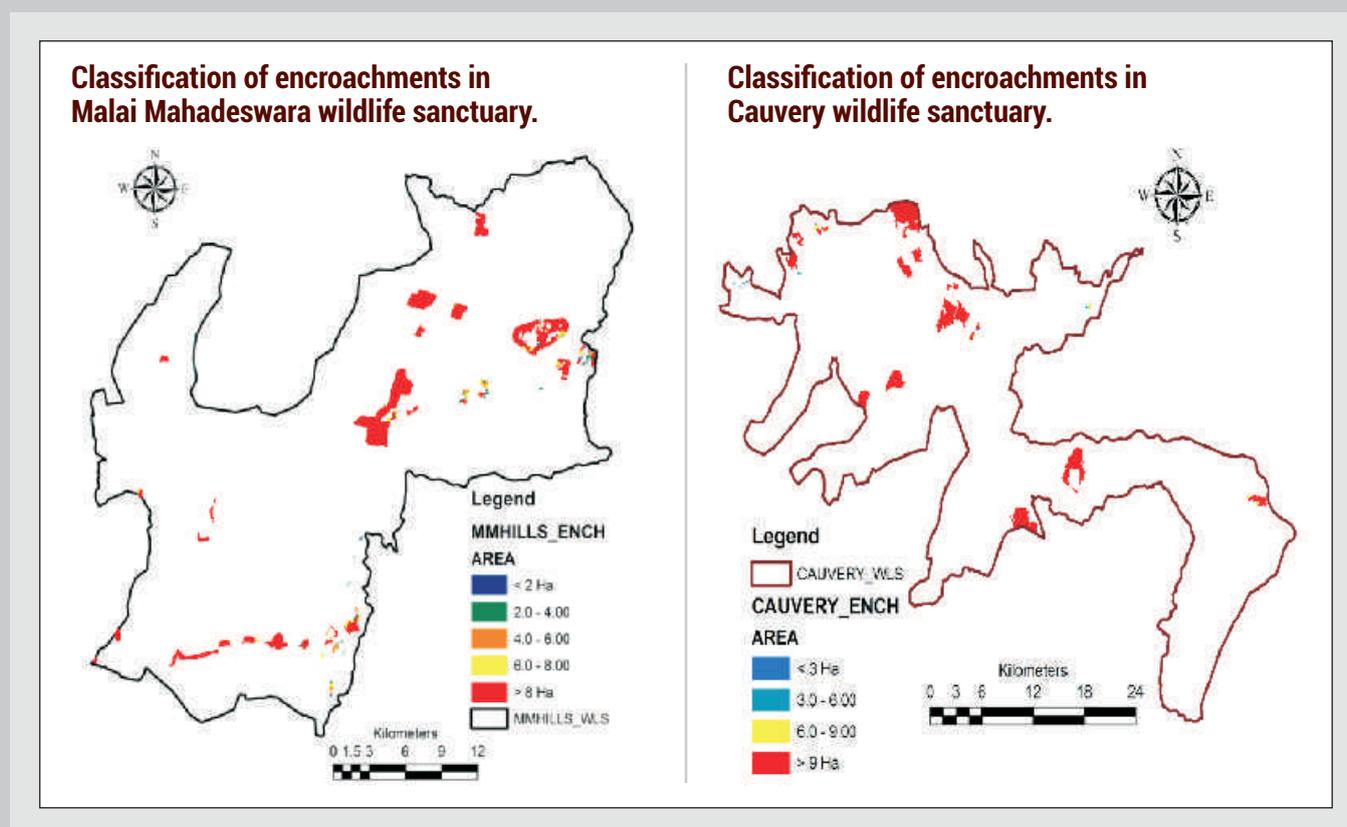
## The Land Use Land Cover changes noticed in Malai Mahadeswara (MM) Sanctuary



The maps revealed an increase in scrub forests and area under agriculture over a period of time. Audit also observed that the built-up and open areas had steadily increased which indicated degradation of forests.

The audit office also conducted a detailed analysis of spatial data to assess the extent of encroachments. The boundary and cadastral maps relating to Protected Areas were obtained from Forest Department and Karnataka State Remote Sensing Applications Centre. These maps were superimposed on the satellite imageries by the consultant engaged (Indian Institute of Science, Bengaluru,) to find out the extent of encroachment in Protected Areas. The analysis indicated that large areas had been encroached in Malai Mahadeswara and Cauvery wildlife sanctuaries.

The map indicating the encroachments in these sanctuaries can be seen in the figures below.



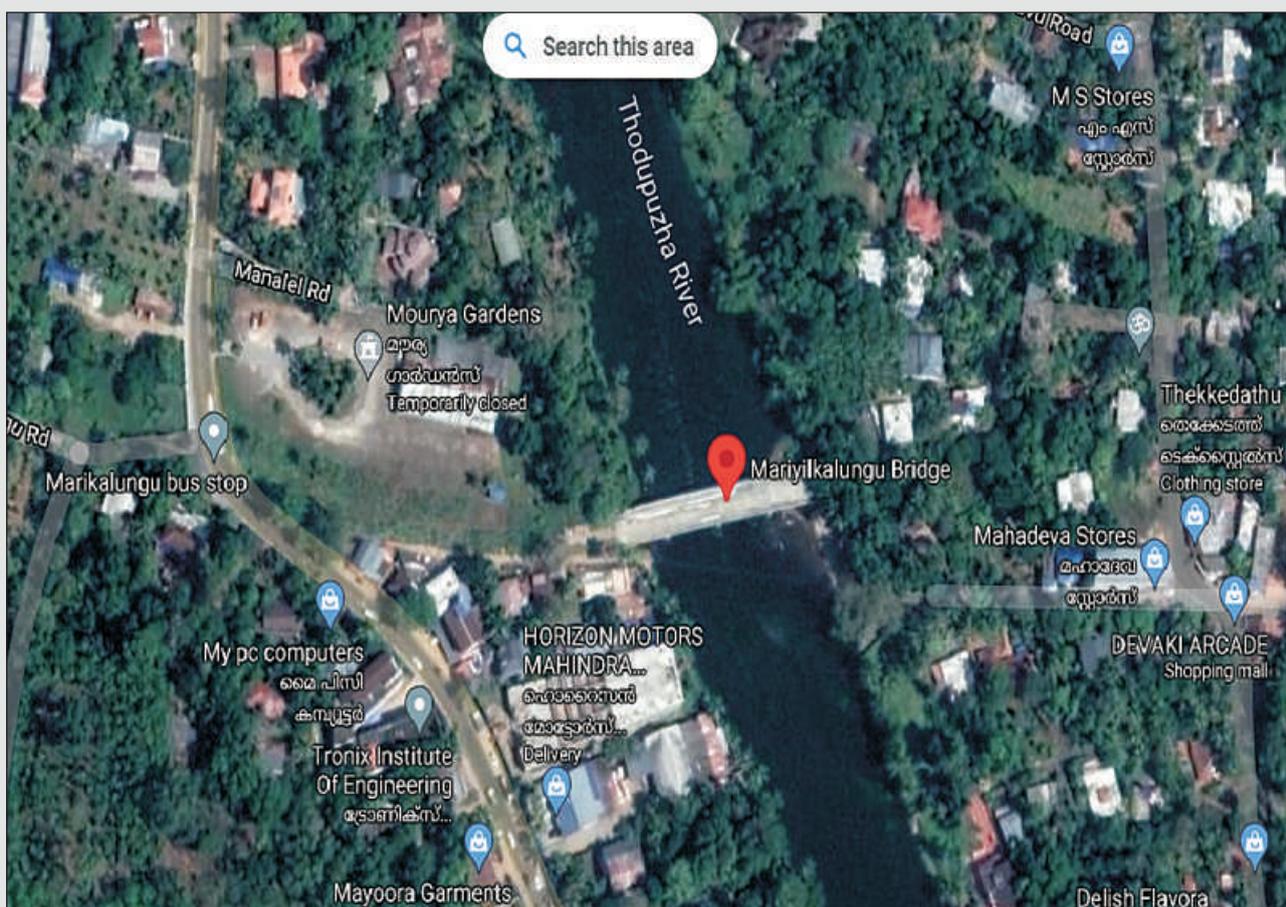
Audit analysis indicated that the encroachments recorded by satellite images were six times that recorded by the State Forest department.

The Government stated that the difference could partly be due to the presence of settlements inside the protected areas but agreed to examine the same.

# Use of Google Maps/Google Earth in Public Works

In the audit of public works, while physical joint verifications have been in vogue, the coverage of sites and works can be suitably augmented by the use of technology tools. In the **Office of the Principal Accountant General (Audit II), Kerala**, the audit team used google maps to view the roads/bridges stated to have been completed as per the records. Audit teams detected that in two cases, construction of bridges was completed but the bridge was not being used for want of unhindered land for approach roads.

## Absence of approach road to the Mariyil Kalungu bridge across Thodupuzha river in Idukki District of Kerala



The **Office of the Principal Accountant General (Audit), Jharkhand**, used Google Earth and associated tools to check bridge sites for verification of connectivity in its audit of the Mukhya Mantri Gram Setu Yojna. The scheme was intended for the construction of bridges over rivers and nallas (big drains) falling in the alignment of rural roads.

The scheme aimed to connect every village (32,394 villages) to gram panchayat, every gram panchayat (4,423 gram panchayats) to block headquarters and every block (260 blocks) with district headquarters (24 districts).

The audit exercise revealed several deficiencies in the bridges constructed under the scheme.

The audit team verified the co-ordinates of the bridges with the images of bridge sites on Google Earth and found that 20 out of 31 bridges examined did not have connecting roads on either side of the bridges. These facts were confirmed during joint physical verification conducted with the State department engineers.



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### No connecting road to the bridge over Kharkai river



Google Earth picture (below) taken by the audit team, shows that the bridges were adjacent to one another and were providing connectivity to the same habitats of nearby locations.



### Impact

- The State Government Department, in response to audit findings, stated that the standard operating procedures for the selection of bridges, the role of consultants, preparation of detailed project report, execution of schemes and monitoring mechanism etc., would be prepared.
- The Department further added that henceforth, the detailed rural road plan of the Prime Minister Gram Sadak Yojana would be taken into consideration at the time of obtaining the feasibility report of the bridges to avoid irregularities such as duplication of bridge works, selection of bridges in municipal areas, absence of connecting roads ahead of approach roads etc.

# Data analytics model

The **Regional Training Institute, Hyderabad**, designed and developed a workable data analysis model based on voucher data using Microsoft Excel, intending to assist both the accounts and audit offices in analysing voucher data obtained through Voucher Level Computerisation. The objectives were to help detect accounting errors, misclassifications etc., as well as assist in planning audits. The model was demonstrated at an all-India virtual seminar held for all accounts and entitlement offices and disseminated widely.

## Highlights of the model

- Microsoft Excel, which is available in almost every system/laptop and widely used by the staff in the organisation, is used for Data Analysis. The model uses only two menu driven features of MS Excel i.e., Pivot Table and Data Slicer. It requires minimal training.
- The model requires the voucher data in a standard template. Designing the query to generate the data in the template format from VLC database is a onetime exercise. The model can effectively be used by both, accounts and entitlement offices and audit offices.
- This model highlights red flag issues, outlier transactions/drawing and disbursing officers, probable misclassifications, accounting errors etc., which must be verified/validated further on field, through the audit processes.
- Using the model at the planning stage itself enables a more focused audit in the field, since issues/ transactions are already flagged for detailed verification during audit.
- Analysis of recipient details through the model helps in detecting the ghost recipients, fraudulent transactions etc.

# Digital Interactive Report

The first digital interactive report, performance audit on “Working of Inland Container Depots (ICDs) and Container Freight Station (CFSS)- Customs” was tabled in both Houses of Parliament in January 2019.

This tabling of digital report was envisaged by the **Customs Audit Wing at CAG Headquarters**, assisted by various field offices involved in the Audit, approved by the Comptroller and Auditor General of India, and finally tabled after extensive consultations with the Ministry of Finance, Ministry of Parliamentary Affairs, Lok Sabha Secretariat, Rajya Sabha Secretariat, and the Department of Legal Affairs. The report was welcomed widely.



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the report

- The report comprises texts, images and a combination of these which communicate the audit findings.
- incorporates a search feature
- is digitally signed.
- is readable in an electronic form across devices like desktops, laptops, tablets and smartphones and can be downloaded and printed as well.

Recognition for the Report also came from an International Body, EUROSAI (European Organisation of Supreme Audit Institutions), whose IT Working Group selected the report from publicly available reports of various Supreme Audit Institutions (the CAG of India in our context) and highlighted it in its portal as an innovation.

# The Report Layout

The screenshot displays the digital layout of the report. At the top, there is a navigation bar with the following elements: the report title 'Audit Report', a list of sections ('Preface', 'Executive summary', 'Recommendations', 'Glossary'), a search box, and icons for a download and the Government of India. The main header area features the title 'Report of the Comptroller and Auditor General of India' and the subtitle 'Performance Audit of Working of Inland Container Depots and Container Freight Stations'. Below this, it identifies the 'Union Government (Department of Revenue - Indirect Taxes - Customs)' and the report number 'No. 16 of 2018'. A large image of a warehouse is partially visible on the right. The lower section highlights two chapters: 'CHAPTER 1 ICDs and CFSs in India: An Overview' with a 'Read More...' button, and 'CHAPTER 2 Audit Objectives, Criteria and Audit Methodology' with a 'Read More...' button. The layout uses a clean, modern design with a color palette of blues, greys, and oranges.

Audit Report   Preface   Executive summary   Recommendations   Glossary   Search    

## Report of the Comptroller and Auditor General of India

Performance Audit of  
Working of Inland Container Depots and Container Freight Stations

Union Government  
(Department of Revenue - Indirect Taxes - Customs)  
No. 16 of 2018

CHAPTER 1  
ICDs and CFSs in India:  
An Overview

[Read More...](#)

CHAPTER 2  
Audit Objectives, Criteria  
and Audit Methodology

[Read More...](#)

## Use of tools in data visualisation

The **Office of the Principal Accountant General (Audit), Assam**, developed a database application in Tableau software by consolidating five years of data from Voucher Level Computerisation application in the Accounts and Entitlement office and the Integrated Financial Management and Information System of the State Government, that can provide transaction details at the lowest account level, and that can be aggregated at different levels depending on auditing requirements.



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the report

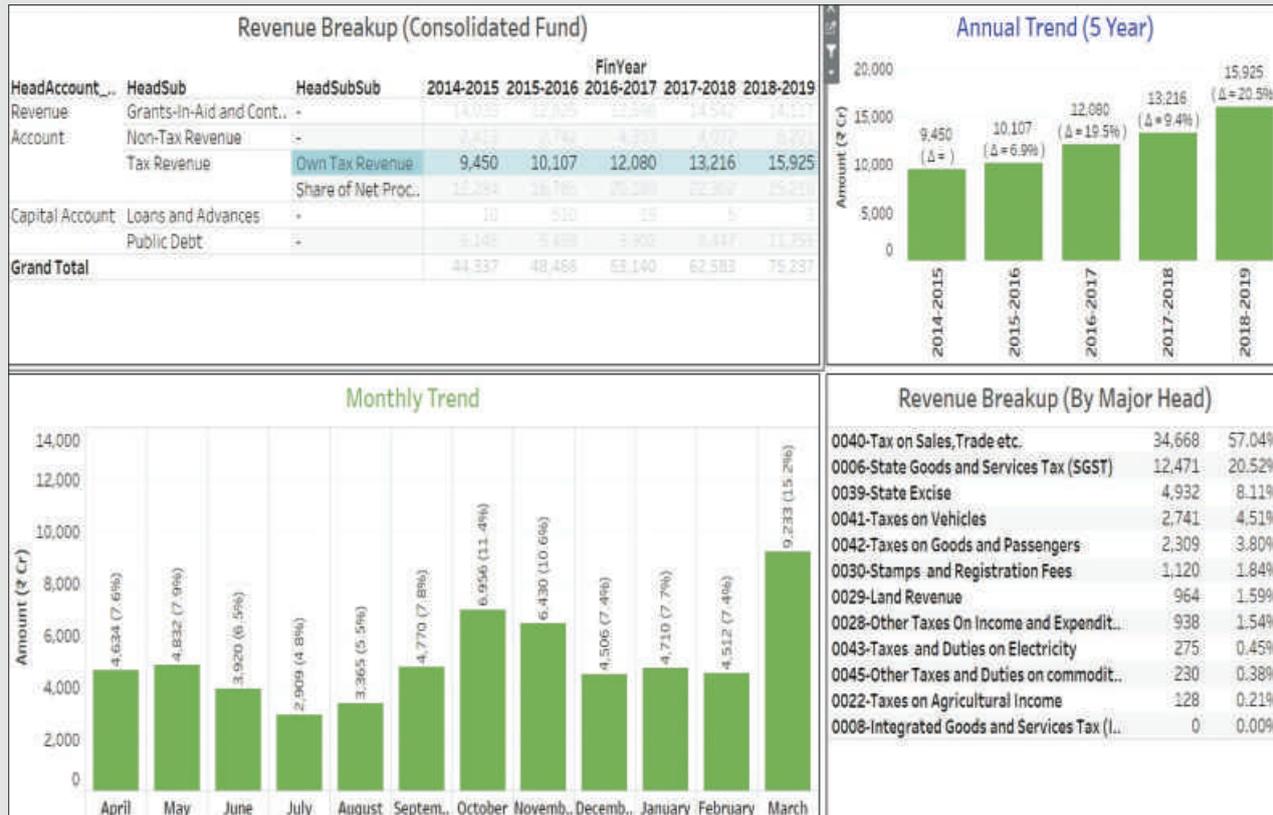
This application is being extensively utilised in audit planning and audit execution where field teams are provided with data relating to their auditee units.

It is the primary application and analysis tool that is used in the preparation of the State Finances Audit Report, where all the tables and charts in the report directly flow from this application. Use of the application also assisted in auditing the draft Finance and Appropriation Accounts Statements. Analytical review is conducted within the application, enabling optimal utilisation of audit resources in auditing the draft annual accounts.

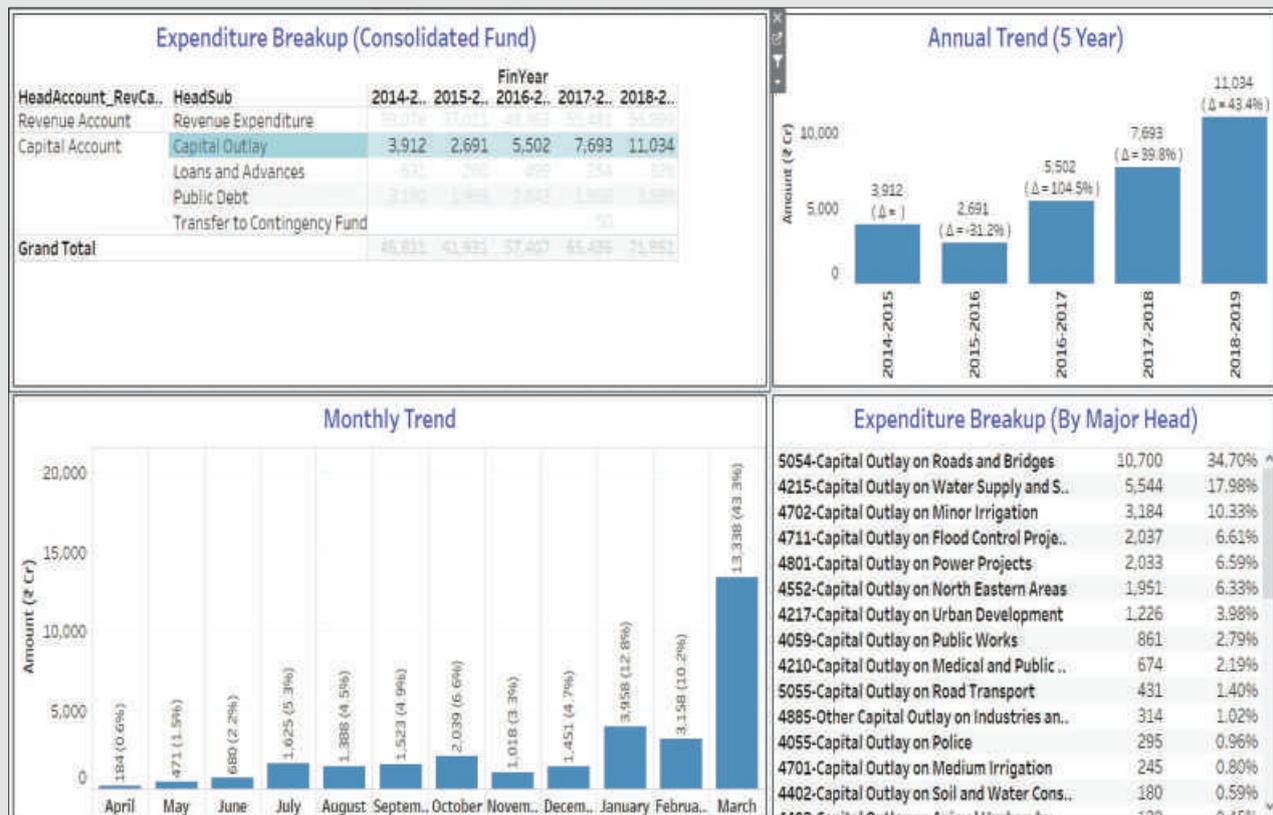
A few audit personnel were also trained in-house in Tableau to access this application remotely, through which they were able to extract expenditure and revenue data for the field audit teams for any department, drawing and disbursing officers, scheme, etc. The application was developed in December 2019 and used for the first time in the Annual Audit Plan for the year 2020-21 and State Finances Audit Report for the year ended 2019.

A few images are shown below to show the different insightful visualisations possible through this application. These visualisations help in gaining an appreciation of overall finances of the State and identify outlier transactions/trends which merit deeper audit analysis.

## Government of Assam - Revenue



## Government of Assam - Expenditure



**OUTCOMES  
METHODOLOGY**

**ADVANCES  
IN  
AUDIT  
APPROACH**



**SAFEGUARDING  
GOVERNMENT  
INTEREST**

**SUSTAINABLE  
DEVELOPMENT  
GOALS**

**SAMPLING  
TECHNIQUES**



**CROSS  
VERIFICATION**



## **Strides in audit methodology and significant impacts**

**Audits responded to Government's increased focus on outcomes by designing methodology to evaluate outcomes.**

**Absence of comprehensive outcome indicators and difficulties in attributing outcomes to a specific government initiative are twin challenges confronting Audit offices in assessing outcomes.**

**This section highlights certain instances of advances in audit approach and a few examples of impactful audits**



# Audit of outcomes in higher education

Audits of the higher education sector involve audit processes that focus on inputs such as existence of plans and policies, utilisation of resources etc., and tangible outputs such as adequate number of Higher Education Institutions, existence of physical infrastructure etc. However, in recent times, the concept of 'outcomes' such as employability etc., have gained primacy among the public and hence challenged audit offices to test the same.



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the report

The **Office of the Principal Accountant General (Audit-1) Rajasthan**, led other State audit offices in conducting the first-of-its-kind audit of outcomes in higher education.

The main challenge was to identify relevant outcomes, the criteria according to which they could be assessed, the metrics by which they could be measured and the standardised benchmarks against which they could be compared. Obtaining acceptance of these outcomes and the methodology for their evaluation by stakeholders was another challenge.

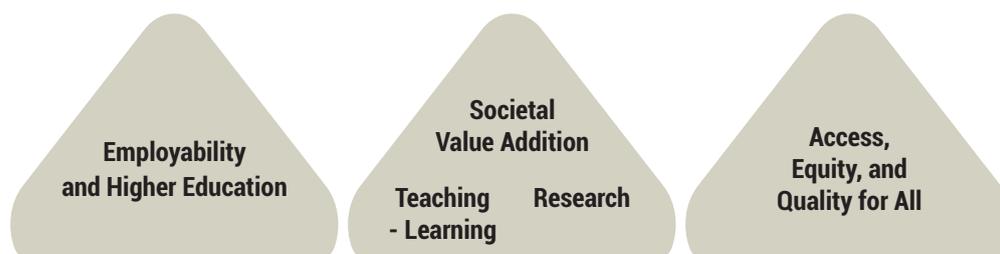
The CAG of India and audit officials engaged with higher education experts to get an initial understanding of the concept and to identify priority areas of higher education. Complete, reliable, and objective criteria was developed. An external consultant was also engaged so that audit findings have an 'outcomes perspective'. The audit office arrived at the broad outcomes of higher education and related parameters to assess them. Twenty-six key outcome indicators, as well as input-output indicators, were formulated for assessing performance.

The office developed quantitative proxy criteria based on the scoring system used by the National Assessment and Accreditation Council, for awarding grades to universities in their accreditation process. The scores obtained by 22 universities that were graded A++, A+, A, B++, B+, B, C under the Council's grading system during 2017-18 was analysed and a correlation between scores and performance of each criterion was developed. The correlation was then used as 'proxy criteria' and it was discussed at length and explained in detail to the Heads of audited units during the entry conference to gain their acceptance.

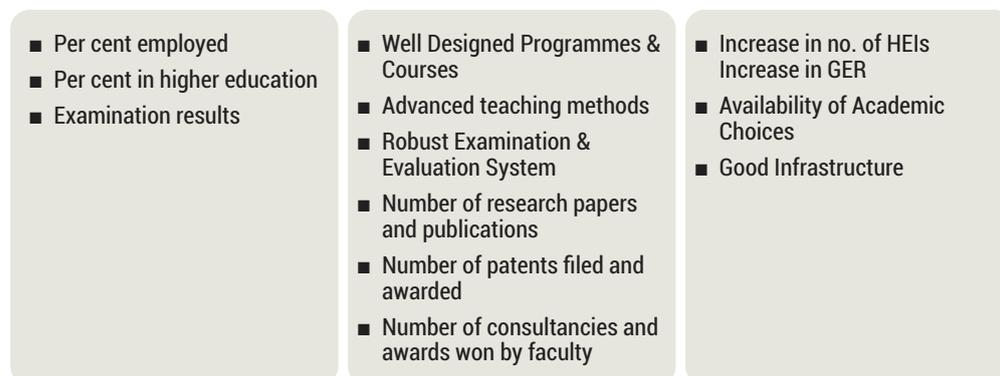
Further, audit reporting was improved by linking the findings obtained from test check of records with indicator-based performance of the institutions and with the findings of student survey.

# Relationship between outcomes of Higher Education and their related inputs, and outputs

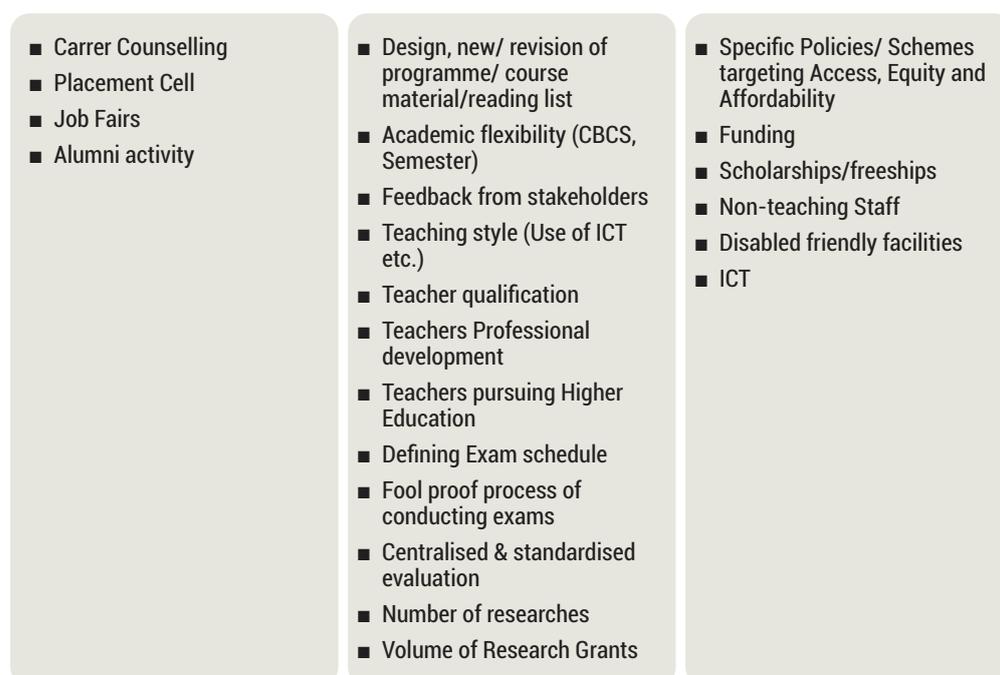
## OUTCOMES



## OUTPUTS



## INPUTS



## GOOD GOVERNANCE



HEIs- Higher Education Institutions, CBCS- Choice Based Credit System  
GER- Gross Enrolment Ratio, ICT- Information and Communications Technology

This initiative has provided an exemplary plug and play model for 'Audit of outcomes of higher education'. The model, developed after intense discussions with several domain experts and stakeholders within and outside government, has proved to be a success, as it:

- demonstrated the ability to finalise outcome indicators, define criteria, and set benchmarks for assessing performance;
- gave the organisation a comprehensive 'outcomes audit' methodology encompassing all aspects of audit process, such as stakeholder engagement, audit planning, presentation of audit results and audit reporting; and
- established the proof of concept of 'horizontal outcomes audit' wherein performance audit was conducted simultaneously by multiple audit offices in their respective jurisdictions under the leadership of a chosen office.

### Impact (Rajasthan)

- Objective assessment of the performance of the institutions against select indicators has exposed many of the chosen institutions to elements of rigorous accreditation process of National Assessment and Accreditation Council and the National Institute Ranking Framework. It prepared them for these crucial qualifications and underscored the need to meet parameters of quality education.
- The State Government also established Divisional Level Quality Assurance Cells and executed MoUs with institutions for providing job-oriented skill development courses

Audits on outcomes in higher education were carried out by other States as well. Audit reports that have been tabled so far can be accessed below.



Scan for the  
Odisha Report



Scan for the  
Tamil Nadu Report

# Outcome based audits of district hospitals

Evaluating outcomes is crucial for timely and systemic corrections in the efforts to achieve the goals laid down in the National Health Policy and expected outcomes of Sustainable Development Goal #3. In this context, various State Audit offices tried to assess the quality of healthcare made available to people at the district-level hospitals and the community health centres.



## Audit of hospital management - Uttar Pradesh

The **Office of the Principal Accountant General (Audit)-I, Uttar Pradesh**, carried out a performance audit of hospital management in Uttar Pradesh during 2018-19, covering the period 2013-18. This pioneering audit was followed by similar audits in various States on outcomes in district hospitals, which provided valuable insights on the state of health services across the country in district hospitals.

The previous audit reports on health sector had focused on compliance issues, mismatch of inputs and outputs, efficiency of quality assurance mechanism, etc. The focus on effectiveness parameter was relatively weaker. Hence, in this outcome-based audit, the office focused on patient care received at the primary and secondary care levels in the State. For the first time, outpatient and in-patient services, maternity services, emergency services, diagnostic services, infection control and drug management, were assessed on pre-determined outcome indicators/criteria in the sampled district-level hospitals and community health centres.



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the report

The table below gives various outcomes and corresponding indicators evaluated in audit.

### Outcome Indicators evaluated

Type	Quality Indicator	Numerator	Denominator
Productivity of hospital	BOR -Bed Occupancy rate (in per cent)	Total patient bed days in a month	Total no. of functional beds x No. of days in a month
	C-section rate (in per cent)	Total no. of C-sections conducted	Total no. of deliveries
Efficiency of hospital	BOR -Bed Occupancy rate (in per cent)	Total no. of discharges	Total no. of functional beds
	DR -discharge rate (in per cent)	Total no. of discharges	Total no. of admissions
	ROR -referral out rate (in per cent)	Total no. of cases referred to higher facility	Total no. of admissions
Clinical care capability of hospital	ALoS-average length of stay (in days)	Total patient bed days	Total no. of admissions
	AER -adverse event ratio (in per cent)	Total no. of adverse events	Total no. of admissions

(Source: NHM Assessor's Guidebook)

Below is an illustration of the detailed measurements painstakingly carried out by audit in respect of various outcome indicators.

### Outcomes vis-à-vis availability of resources in District Hospitals

Hospital	Bed Occupancy Rate (%)	Bed Turnover Rate	Discharge Rate (%)	Referral Out Rate (%)	LAMA & Absconding Rate (%)	Average Length of Stay (In days)	Doctors (%)	Nurses (%)	Essential Drugs (%)	Clinical Pathology Services (%)
DH Agra	49	5.0	77	3	19	3.0	107	236	64	45
DH Allahabad	89	3.8	67	6	25	5.8	88	64	71	59
DH Balrampur	51	2.1	65	11	21	1.7	63	50	46	58
DH Banda	89	1.9	29	22	46	2.1	56	64	73	86
DH Budaun	75	4.4	11	10	78	2.6	107	140	71	90
DH Gorakhpur	61	1.5	32	14	50	3.6	129	254	59	93
DH Lucknow	59	2.0	50	14	25	1.9	101	148	86	97
DH Saharanpur	103	5.3	36	21	37	2.0	59	85	80	59
DH-II Allahabad	95	3.9	81	6	11	5.6	115	91	79	48
JH Lucknow	118	10.7	77	4	19	2.4	154	310	54	79
Benchmark	80-100%	4.1	46%	14%	36%	2.6	100%	100%	68%	71%

A significant number of human resources had to be dedicated in this 'first of its kind' audit. The success of the entire audit effort hinged on the ability of the audit teams auditing the district-level hospitals and community health centres to conduct similar audit analysis to cumulatively identify systemic issues. This was ensured through IT-enabled sharing of audit documentation and its regular analysis by an audit team stationed at Office headquarters.

The audit team made rigorous efforts to arrive at significant audit findings across hospitals and community health centers, a snapshot of which is presented below.

### **Audit Findings**

- For 86% patients in district hospitals and 50% patients in community health centres, consultation time was less than 5 minutes
- High level of Leave Against Medical Advice (LAMA)/absconding rate
- Only 07 to 12 out of 14 essential drugs were available in inpatient department
- Antenatal care was of low quality
- High stillbirth rates of 2 to 2.5 was observed in test checked hospitals
- Improper sterilization - biological indicators were not used for validation, high level disinfection was not done
- Surface and hand hygiene protocols were not followed

### **Impact (Uttar Pradesh)**

The Government of Uttar Pradesh came up with Infection Control Guidelines, Referral Guidelines and Anti-microbial Guidelines in response to the audit report, thus emphasising the role of Audit as a catalyst for governance reforms.

# Performance audit of district hospital outcomes-Uttarakhand

The **Office of the Principal Accountant General (Audit) Uttarakhand**, also took up performance audit of district hospital outcomes. According to NITI Aayog's report (HEALTHY STATES, PROGRESSIVE INDIA; June 2019), the State of Uttarakhand ranked 17th among 21 larger States in Health Index with only Madhya Pradesh, Odisha, Bihar and Uttar Pradesh behind. Hence, looking into the vast scope for improvement in the healthcare sector, the performance audit was taken up in 2019-20.

This audit focused on various services available in district hospitals like out-patient services; diagnostic services; in-patient services; maternity services; infection control; drug management; infrastructure and other issues.

Some audit findings are highlighted below:

- The Department of Medical Health and Family Welfare did not prescribe standards/norms in respect of services to be offered by the district hospitals, and for sanction of resources to the hospitals. The State Government neither adopted the Indian Public Health Standards nor had uniform criteria or norms for provision of out-patient department and in-patient department services.
- Operation theatres for emergency surgeries was not available in any of the test checked hospitals. As a result, all the test checked hospitals could not provide the emergency surgery facility to needy patients during the period 2014-19.
- None of the test checked hospitals had all the 60 essential pathology equipment for the district hospitals and the shortage ranged from 48 to 78%.
- Against availability of prescribed 21 types of essential drugs in the maternity wing of selected hospitals, 1 to 6 essential drugs were not available. Besides, 4 to 13 types of essential drugs remained out of stock for up to 4 months during the sampled period.



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### Impact (Uttarakhand)

Government of Uttarakhand agreed with the recommendations made in the audit report and assured to take necessary corrective measures to improve the functioning of secondary level healthcare facilities.



Scan for the Sikkim Report



Scan for the Meghalaya Report



Scan for the Arunachal Pradesh Report



Scan for the Gujarat Report



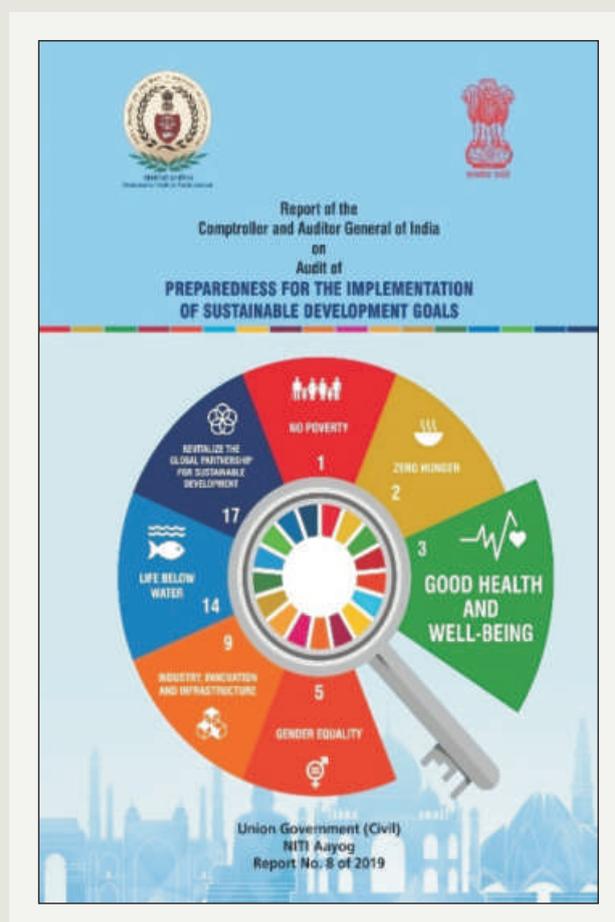
# Audit of Preparedness for the implementation of Sustainable Development Goals

With the adoption of the Agenda 2030 by United Nations General Assembly in September 2015, various stakeholders including the United Nations felt that the Supreme Audit Institutions (SAI - the CAG of India in our context), as independent external oversight bodies, can add considerable value to the follow-up and review of Agenda 2030 enshrined in the Sustainable Development Goals (SDGs).

Accordingly, the Knowledge Sharing Committee of the International Organisation of Supreme Audit Institutions (INTOSAI), headed by the CAG of India and INTOSAI Development Initiative, decided to take steps for audit Sustainable Development Goals, beginning with an assessment of preparedness of governments towards achieving these goals.

CAG officials also participated in an international cooperative audit of preparedness for the implementation of Sustainable Development Goals. This audit encompassed an experimental audit approach to address interlinked and integrated nature of these goals. It also posed challenges such as non-uniformity of audit criteria, need to augment domain knowledge & expertise and nuanced audit reporting for both national and international audiences.

These challenges were overcome by the **Office of the Director General of Audit (Central Expenditure), New Delhi**, by using new audit tools (RACI-Responsibility Assignment Matrix), establishing stakeholder engagement (starting with the first national seminar on Sustainable Development Goals audit in CAG's International Centre for Environment and Sustainable Development at Jaipur in 2017) to understand the subject matter, adopting the 'whole of government approach' and ushering innovative solutions to strengthen the audit process.



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The audit report was highly valued by various national stakeholders and international bodies. Audit recommendations were not only accepted by various stakeholders but also keenly followed up by the Public Accounts Committee of the Union Government. There were improvements reported in Voluntary National Reviews based on the issues and challenges brought out in the audit report.

Reporting and discussion of audit results, and SAI's India experience in SDG audit also established SAI India, as a leader in SDG audit engagement. Representatives of the CAG's organisation presented the approach at the INTOSAI International Scientific and Practical Conference, in April 2021. The Aston University, Birmingham, UK also invited participation from SAI India in a related research project.

## Audit Challenges

Subject Matter and Approach	Audit Criteria	Capacity Building	Audit Process	Audit Report	Post Audit Initiatives
<ul style="list-style-type: none"> <li>■ Novel and complex</li> <li>■ First audit on Preparedness for the implementation of SDGs</li> <li>■ Adoption of "Whole of Government" approach</li> <li>■ Extensive stakeholder engagement and deliberations</li> </ul>	<ul style="list-style-type: none"> <li>■ Absence of a defined criteria for implementation</li> <li>■ The 2030 Agenda for Sustainable Development is a global process with no uniform criteria for implementation</li> <li>■ UNDG Reference Guide allows adoption of global</li> <li>■ SDGs to National context</li> </ul>	<ul style="list-style-type: none"> <li>■ SAI India nominee as mentor contributed in preparation of IDI guidance and model on auditing</li> <li>■ Capacity Building through IDI e- learning program</li> <li>■ Dissemination of knowledge through pre-review workshop</li> <li>■ SDGs audit training courses at iCED and iCISA for national and international participants</li> <li>■ Creating pool of officers with SDGs audit expertise</li> </ul>	<ul style="list-style-type: none"> <li>■ Setting of different priorities at national and subnational level</li> <li>■ Identification of uniform data and information to be obtained from stakeholders</li> <li>■ Comprehensive coverage of the topic as compared to other SAIs (17 Central Ministries 7 States, Goal 3)</li> <li>■ Designing questionnaires and Audit Design Matrix meticulously</li> </ul>	<ul style="list-style-type: none"> <li>■ Compiling and interpretation of massive information and data collected</li> <li>■ An up to date and balanced report, including achievements and initiatives of the Government prepared</li> </ul>	<ul style="list-style-type: none"> <li>■ SDGs implementation initiative is a continuous process.</li> <li>■ The report discussed by PAC and its sub-committees in five meetings (September 2019 to March 2021)</li> <li>■ Audit regularly updated itself on SDGs related activities of the Government for discussions during the PAC meetings</li> </ul>

# Performance audit on coal management

The Office of the Accountant General (Audit)-II, Tamil Nadu, took up a performance audit on coal management in Thermal Power Stations of Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) due to concerns about poor financial health and operational inefficiencies of TANGEDCO.

Audit focused on issues relating to coal quality as coal constituted around 95 to 98% of the cost of thermal power generation of TANGEDCO.



To augment technical expertise, the audit team interacted with representatives of Tamil Nadu Electricity Regulatory Commission about the regulatory framework of fixation for tariff based on quality and quantity of coal and other parameters. The audit team attended a three days' "National Seminar on Coal Quality" convened by the Indian Institute of Coal Management, Ranchi, wherein several power and coal industry experts deliberated on the coal quality issues in detail. The Office also conducted a one-day workshop on "Industrial Practice in Coal Management in Power Sector."

The audit team collected coal samples from the thermal power station of TANGEDCO and tested the same for changes in gross calorific value in an accredited laboratory. The audit team observed that as against the normative loss of calorific value of 120 kcal/kg, the actual loss of calorific value during transportation from mines to discharge ports ranged between 140 to 2,256 kcal/kg resulting in wasteful expenditure of ₹2,012.65 crore. Even though there were instances of drop in gross calorific value during consumption immediately upon its receipt on the same day, TANGEDCO had not analysed the reasons for the same.

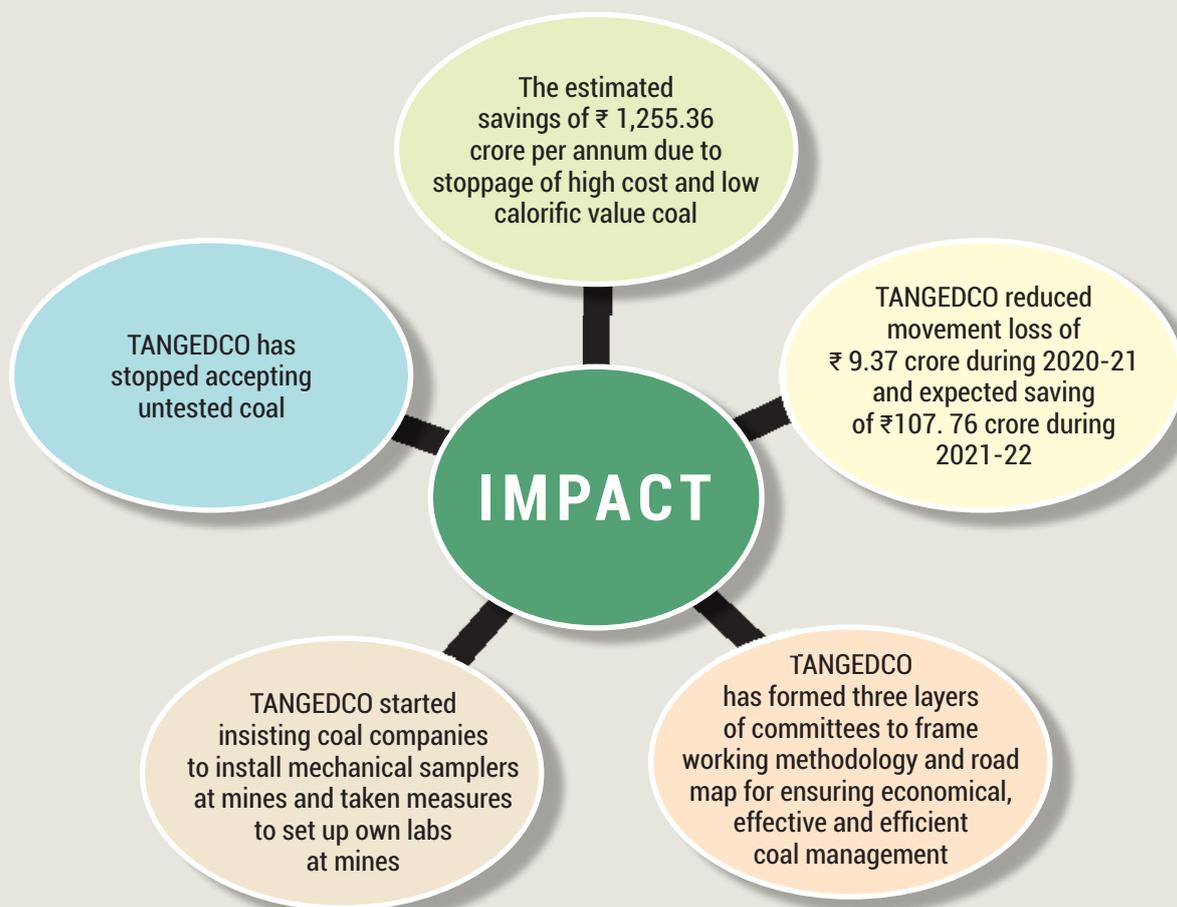
An accurate analysis of the fall in quality of coal from mines end to consumption end at the thermal power station, and efficacy of system of coal quality assessment by TANGEDCO, were brought out in the audit report which was well received and acknowledged by the company's top management and Government.



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## Audit Findings

- Detailed analysis of test reports of third-party results vis-à-vis declared grade and referee results revealed that TANGEDCO accepted lower grade of coal without protest.
- Audit noticed Gross Calorific value (GCV) was determined improperly using mathematical formula without testing coal.
- Audit reported that even though TANGEDCO purchased power from Central Generating Stations based on 'As Received GCV', it had not adopted the same method for selling power to consumers resulting in over burdening the consumer with ₹1,805.35 crore during 2014–19.



# Audit of National Pension System

A performance audit of the National Pension System was carried out by **the Office of the Principal Director of Audit (Economic and Service Ministries), New Delhi**. Audit scope involved the coverage of the scheme and efficacy of its implementation in respect of Tier I contribution (non-withdrawable pension account) of Government employees.

The audit was significant as National Pension System was made applicable to all new entrants to Central Government service (except Armed Forces) with effect from 01 January 2004 replacing the old pension system and thus impacted the social security of government employees.

A major challenge was to understand the complexities, as several changes were brought into the scheme over the years, since 2004. Major rules guiding the scheme could be broadly divided in three phases (2004-08, 2008-12 and 2012-18). It was a challenge to select the samples and analyse data in respect of each of the phases with respect to distinct criteria within a limited period of audit.

Coordinating field audit was a challenging task as audit teams were deployed across the country to examine the records of 3,822 subscribers in 257 DDOs. The audited entities involved 16 Ministries and Departments, 7 states and 2 union territories. There were differences in the record-keeping and accounting arrangements in respect of Central Government employees and in respect of employees of State Governments and Central and State Autonomous Bodies.

To overcome these challenges, separate set of criteria for different periods and for separate set of entities involved had to be identified. The office created spreadsheets encompassing 100 fields for collecting information, maintained in different formats, from concerned audited offices. All the audit teams from participating offices were called before the field audit for discussion which facilitated uniformity in field audit and in compilation of the report in the end.

The Audit effort was acknowledged by the Executive who promptly initiated course correction.



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the report



## Audit Findings

- Essential controls to ensure 100% coverage of eligible employees was not envisioned during formulation of the scheme, and consequently, such assurance was lacking despite 15 years of implementing NPS. There was also no assurance that all Nodal Offices (under Central Government, State Government, Central and State Autonomous Bodies) were registered under NPS.
- There were delays in issue of Permanent Retirement Account Number, first deduction of NPS contribution, bills reaching Pay and Accounts office and remittance of contribution to the Trustee Bank. However, no penal provisions existed for such delays on the part of Government Nodal Offices.
- There was no indication of actuarial evaluation having been conducted once in 2 years or of adoption of any other mechanism to assess the viability of the fund/ Scheme.
- Ministries/Departments had not constituted the Committee for overseeing and monitoring NPS comprising Joint Secretary, Principal Chief Controller of Accounts and Financial Advisers.

## Impact

- NPS Rules which were pending finalization for 15 years of implementation of the scheme, were notified in March 2021.
- NPS Rules prescribed the timelines to be followed at each level of the nodal office. The penal provision for not following the timelines was also prescribed to ensure compliance to the provisions of the Rules and protect the interest of the NPS subscribers by avoiding delays.
- Parity was established between Government and Private NPS subscribers by giving the option of pension fund and choices of scheme to Government subscribers through a notification (January 2019).
- In the aforesaid notification, compensation for non-deposit or delayed deposit for the period 2004-12 was specified but the compensation for such instances post 2012 was not addressed. The same has now been incorporated in the NPS Rules notified in March 2021.
- Department of Financial Services stated that in respect of replacement rate of 50% of the last pay, appropriate mechanism will be explored and developed for achieving this standard of post retirement security.
- Government proposed to evaluate mechanisms through which certain investment protection guarantees could be offered to the subscribers seeking minimum assured returns. The Pension Fund Regulatory and Development Authority, in February 2019, has initiated the process to design Minimum Assured Return Scheme.

# Swachh Vidyalaya Abhiyan

(Audit inspected 2,695 toilets across 2,048 schools in 15 States)

Ministry of Human Resources Development launched Swachh Vidyalaya Abhiyan in September 2014 to achieve the objective of separate toilets for boys and girls within a year.



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Fifty-three Central Public Sector Enterprises participated in this project and constructed 1,40,997 toilets under their CSR activities. Records pertaining to seven CPSEs, which constructed more than 5,000 toilets each {NTPC Ltd, REC Limited, Power Grid Corporation of India Ltd, PFC Limited, NHPC Limited, Oil and Natural Gas Corporation Ltd and Coal India Ltd (seven subsidiaries)} were examined by the **Office of the Director General (Energy), New Delhi**. As part of the methodology, the audit teams conducted a physical survey of a statistical sample of 2% of the total number of toilets stated to have been constructed.

Substantial audit efforts were involved as 2% of the sample surveyed translated into inspection of 2,695 toilets across 2,048 schools in 15 States and schools/ toilets were remotely located, in hilly terrain, disturbed areas and far-flung villages etc. Almost all the staff of the office had to be deputed in teams for carrying out the field survey from September 2017 to January 2018.

Audit conducted a survey with standardized questionnaire which included information in respect of enrolment, number of toilets – existing/ constructed, availability of running water, maintenance arrangement and other aspects in usability of toilets. The information filled in the questionnaire was also supported by geo-tagged photographs.

The audit teams, additionally, obtained opinion from students, especially of primary schools, with help from the school authorities. Completion of the survey within school timings, also considering the local holidays was challenging.



Photograph from audit report of a toilet not in use

Support from Block Development Officer and District Education Officer were also sought to facilitate completion of the survey within the limited time available. Information filled in for each of the selected school was got attested from the Principal/ Headmaster of the school, who were also given the opportunity to give their remarks/ recommendations on construction/ maintenance of the toilets.



### **Audit Findings**

- 83 out of 2,695 toilets (3%) in the audit sample, were identified by CPSEs but not constructed.
- In respect of the remaining 2,612 (2695-83) toilets reported to have been constructed, 200 toilets were not found constructed, and 86 toilets were found partially constructed. This amounted to 11% of toilets in the remaining audit sample.
- Out of 2,326 (2613 -286) constructed toilets surveyed, 691 (30%) were found not in use.
- 72% of constructed toilets were without running water, 55% without handwashing facility and 75% were overall not hygienically maintained.
- Out of 1,967 co-educational schools surveyed by Audit, 99 schools had no functional toilets while 436 schools had only one functional toilet.

# Audit of quality of roads

The **Office of the Accountant General (Audit-II), Kerala**, took up a review on the quality control measures in maintenance of roads by the Public Works Department. The challenge was to assess the composition of materials used in the public work and examine if they were in accordance with the claims in Government records. Site visits and visual examination may not reveal irregularities in the inferior quality of road works, as major portion of the work done remains under the road surface. Hence, the audit team decided to think beyond the horizons of traditional audit evidence collection methods.



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The audit team conducted a joint verification along with the officials of the quality control wing of the public works department and used a specialised machine for core cutting of bituminous surface in a completed road work. The core cutting revealed that the 'measurement book' contained incorrect measurements regarding the works completed and the quantity of work done was less compared to the stipulated quantity. Issue of incorrect calculation of volume of work by the department based on fictitious level measurements and the resultant inadmissible payment to contractor was commented upon in the audit report.



# Audit of Jammu and Kashmir Bank

The **Office of the Accountant General (Audit), Jammu and Kashmir**, carried out a performance audit of the working of the Jammu and Kashmir Bank for the period 2013-14 to 2017-18. The audit report highlighted issues relating to:

- extending credit facilities in departure from norms, without obtaining security and without adhering to required banking norms, leading to Non-Performing Assets (NPAs),
- settlement of NPA cases in contravention of Bank's recovery policy,
- issues in corporate governance and recruitment process at the Bank
- non-safeguarding of bank's financial interest in discounting of supplier bills.



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In June 2019, the Government removed the Chairman of the Bank and Anti-Corruption Bureau of the State started raiding premises of various loan defaulters. Several steps were taken to streamline corporate social responsibility spends.

Additionally, action was taken by the anti-corruption bureau and by filing of FIRs in respect of loans sanctioned to firms, in hundreds of crores, without obtaining tangible security and violating banking norms.

An audit observation was made about payment of ₹58.80 lakh by the Bank to the Government Nominee Director. The Government, in response, recovered the remuneration and refunded it to the Bank.

# IT Audit of Integrated Online Examination System

The Audit of Integrated Online Examination System of West Bengal Central School Service Commission was conducted by **Office of the Principal Accountant General (Audit-I) West Bengal**. It is the first such audit of an online examination system.

## Audit Findings

- Manipulation in scoring due to manual intervention
- Tampering the backend data, ineligible candidates were selected for personality test and subsequently selected for the job
- Failure to ensure transparency and fair-competition
- No proper documentation of system development
- Manual intervention marred the system
- Unauthorised change in caste category of candidates
- Paper trails were willfully destroyed before prescribed period for which such sensitive records should be kept
- No secured connectivity for exchange of confidential data
- Business continuity plan was missing
- Failed to map business rules

## Impact

An Enquiry Commission was established by the Minister for Higher Education

# Distillery Audit

The **Office of the Accountant General (Audit)-II, Uttar Pradesh**, undertook an audit of Wave Distillery and Breweries Ltd., Aligarh, Uttar Pradesh. Submissions made by the assessee in statutory returns to the Income Tax Department were cross verified in audit with respect to those made to the Assistant Excise Commissioner, Wave Distillery and Breweries Ltd., Aligarh. Audit office was able to establish that the assessee had understated the consumption of inputs/intermediates, resulting in evasion of excise revenue and interest thereon of ₹1,646.04 crore during the period 2013-14 to 2016-17.

## Impact

- All the Deputy Excise Commissioners have been directed to reconcile the raw materials consumed as depicted in the records of the distilleries, with the records submitted to the Income Tax Department through the statutory returns.
- Excise Commissioner has further directed that in case of differences noticed in the records of the two Departments, cases of such tax evasion should be brought to the notice of the Headquarters for considering the issue of notice for revenue recovery. Such examination of the records has been ordered for the past ten years.



# Audit of Deen Dayal Upadhyaya Grameen Kaushalya Yojana

The Office of the Principal Accountant General (Audit-I), Odisha, carried out an audit of Government of India introduced (September 2014) youth employment scheme, Deen Dayal Upadhyaya Grameen Kaushalya Yojana. The scheme aims to provide skills to rural youth and jobs with regular monthly wages. Under the scheme design, Government of India provides 60% of the training cost and the balance 40% is borne by the State Government.

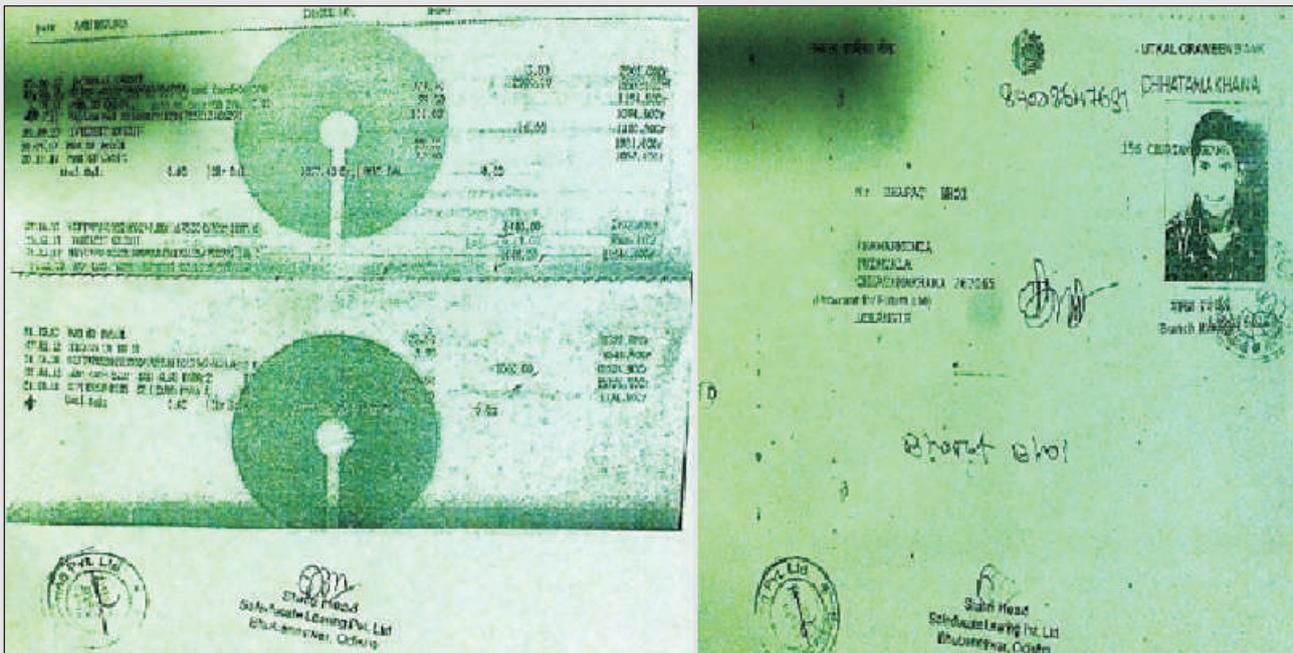
Odisha Rural Development and Marketing Society (ORMAS), a registered society, under the administrative control of the Panchayati Raj and Drinking Water department was responsible for implementation of the scheme in the State. The Society engaged project implementing agencies to impart training in Placement Linked Skill Development courses and to ensure job placement.

The audit team test-checked programme implementation by selecting 18 out of 95 project implementing agencies who were awarded projects worth ₹436.17 crore. These project implementing agencies had imparted training to 46,097 youths and claimed to have provided placement to 31,556 youth.

Audit test checked records relating to 5,160 trained candidates and 607 placed candidates to ascertain the veracity of the claims of the department and noticed that:

- 14% of trainings and 77% of placements as claimed by the ORMAS were found to be false and fabricated
- Projects worth ₹197.05 crore were irregularly sanctioned by violating the procedures envisaged in the scheme guidelines
- Amount of ₹59.83 crore was required to be recovered along with penal interest from the test checked project implementing agencies
- 4 implementing agencies were awarded projects worth ₹76.34 crore arbitrarily without conducting mandatory qualitative assessment in terms of their financial strength, commitment to captive placement, parent company structure and core sector presence, etc.
- None of the project implementing agencies could achieve the training and placement targets.
- 4 project implementing agencies were sanctioned 5 projects worth ₹102.13 crore though they were eligible for projects worth ₹25.20 crore only based on their turnovers. Thus, ₹76.93 crore were awarded disregarding their eligibility. The project implementing agencies were found to have failed in achieving the placement targets. The process of recovery of dues have been initiated.
- In respect of 40 out of 112 candidates whose salary accounts were opened in UCO Bank, the audit team sought details of confirmation of genuineness of credit of salary from the Bank. In response, UCO bank intimated that 6 bank accounts were non-existent, and no such transactions had taken place in 33 accounts. Thus, claims of placement of these candidates were not genuine. These 3 project implementing agencies had received ₹27.89 crore towards training and placement charges as of March 2019.

Safexpress Private Limited, had submitted bank statement of a candidate claimed to have been placed at M/s Jena Engineering, Jharsuguda in November 2017. While the account details of the bank statement indicated that the bank account was in Utkal Grameen Bank, the inner pages showed transaction details containing logo of State Bank of India (SBI), as seen from the photo affixed below.



In response, the State Department stated (June 2020) that in case of 2 project implementing agencies, recovery process had been initiated while closure notice along with notice for recovery of penalty had been issued to the third project implementing agency

- 3 project implementing agencies secured projects worth ₹33.04 crore by furnishing false performance reports
- One project implementing agency (Abbey West Services Private Limited) had submitted (December 2016 and August 2017) fake employee state insurance corporation numbers in the salary slips of 19 candidates and received ₹4.18 crore. The Department has recovered ₹2.74 crore only from the agency.
- Without verifying the genuineness of placement claims of 5 project implementing agencies despite issues like false employee state insurance corporation numbers, non-production of bank statements, payments made in cash in contravention of scheme guidelines, submission of forged bank statements, etc., ORMAS released instalments to project implementing agencies. The excess amount paid worked out to be ₹10.83 crore. Department has recovered ₹68.81 lakh and issued recovery notice for the remaining amount.
- ORMAS had not recovered ₹20.11 crore given to 20 project implementing agencies which had been declared non-performing. On being pointed out in audit, the Society recovered ₹2.55 crore and process had been initiated for recovering the balance amount.



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Audit concluded that the implementation of the scheme by the Society was mired with several internal control weaknesses and serious irregularities.

# Audit of production sharing contract- safeguarding government's financial interest

Government entered into a production sharing contract with joint venture partners for operation and production from oil and gas fields. The contract stipulated that the abandonment liability (costs arising from decommissioning, abandoning the assets) of such fields were to be met from the revenues generated from the reserves of the field. In case of the Tapti joint venture, the private operator, however, notified the Government in December 2013, that the estimated recoverable reserves (net of operating costs) from the field was not sufficient to meet the estimated abandonment liability.



The government nominee of the Oil and Natural Gas Corporation (ONGC), approached the joint venture to take over part of the created facilities, with the condition that the funds required for abandonment obligation would be transferred by the joint venture. However, the two private partners in joint venture (British Gas Exploration and Production India Limited and Reliance Industries Limited) did not agree to fund the abandonment obligation.

In a subsequent meeting held in January 2015 in the Ministry of Petroleum and Natural Gas, with the representatives of ONGC, Tapti joint venture and Director General of Hydrocarbons, it was decided that ONGC will take over the part facilities and thereby assume the liability for abandoning the same.

The audit team pointed out that the above decision of the Ministry was not in line with the provisions of the production sharing contract as the abandonment liability rests with the joint venture (not with ONGC) in the event of insufficient reserves to meet abandonment liability. It was stated in audit that such incorrect application of the provisions of production sharing contract may set a wrong precedent for future cases, which may be detrimental to Government's interest.

Ministry, in response to audit observation, reversed its earlier decision of abandonment liability to be borne by ONGC and directed the joint venture to transfer required funds to ONGC for meeting future abandonment obligations. Accordingly, the facilities were transferred to ONGC.

On expiry of the production sharing contract period (December 2019), the private partners transferred ₹2,697.40 crore to ONGC for abandonment of joint venture transfer facilities. This recovery from private operators, made at the instance of an audit observation, has set a sound precedent in protecting government's financial interest.





monetary dynamics

\$820.51

\$678.06  
\$697.98

3.21

\$5.74

\$455.59



Manganese  
Steel  
Chromite

Bauxite  
Chrome

Oil

Electricity

Iron

Coal

Aluminum

Gold

Silver

Palladium

Platinum

Rhodium

Iridium

Rosetta

Vanadium

Antimony

Indium

Thallium

Lead

Zinc

Copper

Nickel

NOV DEC

## Technology in Audit

**The vision for a technology-enabled CAG's organisation is critically dependent on seamless and routine access to IT systems of auditable entities and electronic data, as is expected in a professional auditor-auditee relationship**

**This section describes instances where the audit approach has been transformed and a significant part of the audit process has been digitalised.**



## Data led audit

The CAG's organisation has responded actively to the twin challenges; technological challenges posed by the rapidly evolving digital environment and challenges posed by the pandemic. The organisation kept pace by instituting data led audits as in the case of audit of Goods and Services Tax and Direct Tax, remote financial audits of autonomous bodies and central public sector enterprises and remote audits of international organisations and Indian offices abroad.

Enabled by access to the Information System/Enterprise Resource Planning module of some of the audited entities, several audits have been carried out. The fact that the auditors were able to quickly elevate their Information Technology (IT) skills is testimony to the investment that has been made in developing IT capability in the organisation, across all cadres, over the years.

### Goods and Services Tax Audit

The introduction of GST resulted in most processes becoming digital and audit kept pace with the digitalisation. **The Goods and Services Tax Wing at CAG Headquarters and the office of the Director General of Audit (Central Revenues), New Delhi, under the guidance of the Comptroller and Audit General of India,** undertook several steps to obtain data access, establish requisite audit processes, and gain technological capabilities and skills to successfully discharge CAG's Constitutional responsibilities.



several steps to obtain data access, establish requisite audit processes, and gain technological capabilities and skills to successfully discharge CAG's Constitutional responsibilities.

An institutional arrangement was formalised, for the first time, both with external stakeholders on data access and within the organisation on implementing the data led audit approach. This has standardised the approach to GST audit across all the 9 Central GST Audit Offices and the 31 State GST Audit Offices.

The prerequisite for data led approach is unfettered access to data sets. The GST Council has accepted that the audit teams will have access to full pan-India data at Goods and Service Tax Network premises and access to backend systems of tax departments. Within one year of formalising the approach, two pan-India audits on Refunds and Transitional Input Tax Credits, have been successfully conducted.

Several challenges were encountered in these audit engagements regarding coordination with GSTN/field offices, identifying risk parameters, developing domain expertise, etc. The sheer volume of pan-India data and security related issues due to the confidential nature of the data posed inherent technical challenges, like working out modalities of access to GST data and developing an understanding of GST data for audit analysis.

The organisation, through the core team, constituted for risk analysis and data extraction, having representation from GST Wing, team of the Chief Technology Officer at CAG Headquarters and Central and State GST field audit offices, has gained a fair understanding of the GSTN database, data structures, data tables and their inter relationship. This being an evolving process, every successive audit in accordance with this approach is deepening the understanding of various data points for what they purport to represent and their relative significance.

The data led approach is enhancing audit outcomes and is promoting transparency and accountability. The sampling methodology has now progressed to selecting transactions, based on identified risk parameters, instead of selecting audit units (various offices of the tax department), as was done earlier. The extent of deficiencies is now reported against the entire population of a subject or issue taken up for audit. This approach provides a perspective both on the magnitude and frequency of shortcomings so that corrective action could be initiated at a systemic level rather than at an individual taxpayer's level.

Remote access has reduced the need to visit audited units and enhanced audit efficiency and transparency. On the technology side, the approach of deploying resources – team of domain plus IT experts in a sustained manner is new to the organisation.

A dedicated Core Team is carrying out pan-India data analysis on a continuous and iterative basis for increased audit impact and efficiency. The new approach adopts a consultative approach to planning and implementing GST audits through the GST Steering Committee of Senior Management Members of the CAG's organisation.

# Direct Taxes

An innovation in audit approach was brought in 2018-19 by the **Direct Taxes Wing** in conducting, performance audits and subject-specific compliance audits. The innovation included integration of data analytics with the audit process at all three stages i.e. planning, execution and reporting.

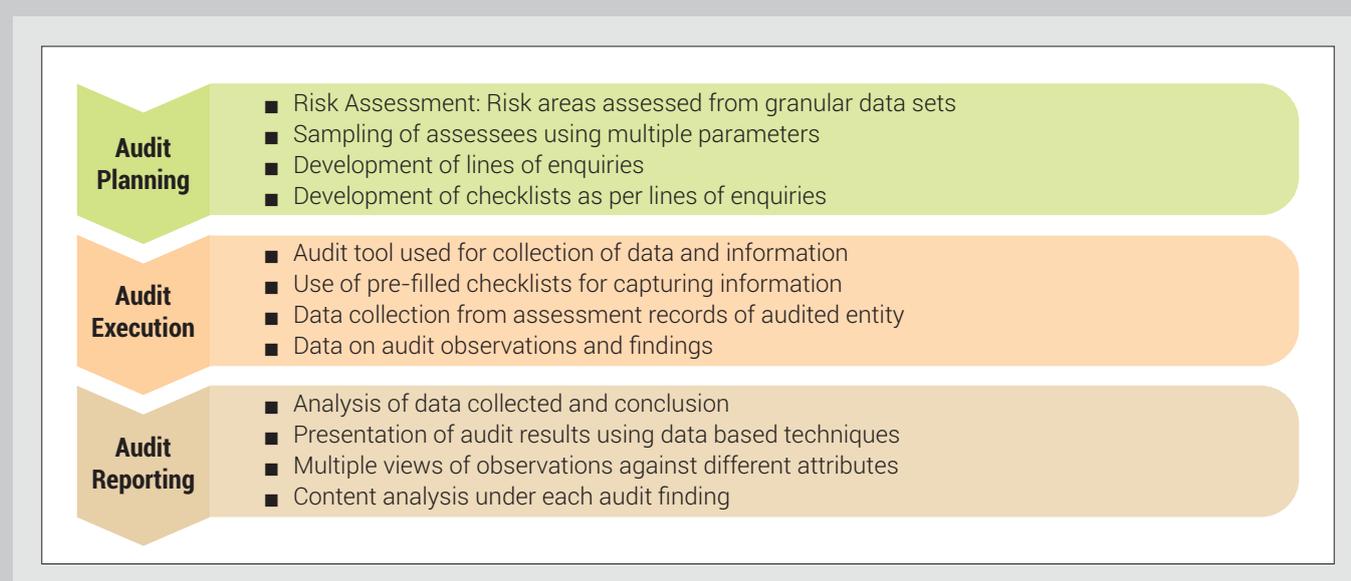
Audits undertaken using this approach included "Performance Audit on Assessment of Co-operative Societies and Co-operative Banks" and compliance audit on "Interest under sections 234A, 234B, 234C and 244A of the Income-tax Act, 1961".

Data sets, involving details of each assessment undertaken relating to the audit topics mentioned above, were sought from the Income Tax Department. This granular data (detailed data) was obtained in specified formats, covering 'attributes' (qualitative features) and, 'measures' (quantitative features) related to each assessment.

Analytics on these data sets were done centrally at the Direct Taxes Wing to arrive at an unbiased, risk-based, representative sample. This sample was then used for determining the relevant audit units instead of the earlier sampling approach which involved the selection of audit units (offices of the tax department), as the starting point. This sample was also utilised to prepare pre-filled audit checklists.

A user and navigation friendly audit tool was designed and developed using MS Excel spreadsheets, incorporating all possible lines of enquiry. Audit observations, enriched in form and content were analytically derived from information gathered in checklists. Spreadsheets were shared with the Income Tax Department incorporating results of analytics included in the Audit Report.

This audit approach, which takes data as the starting point for centralised risk assessment, has been replicated in all audits planned in Direct Taxes Wing since 2018-19.



# Remote Access Audits

The pandemic necessitated a need to innovate and develop the capacity to carry out audits using technology, primarily in financial audits of autonomous bodies and central public sector enterprises which had an end-to-end enterprise resource planning application to carry out their business processes. Compliance audits were also conducted where such audited entities were able to provide all transactions details electronically.

These audits were possible by the exceptional support rendered by the audited entities - providing complete access; responding promptly to audit requisitions and queries; and training auditors on the applications, as required.

Office of the Director General of Commercial Audit, Mumbai	Office of the Accountant General Audit-I, Rajasthan	Office of the Principal Director of Audit (Central), Ahmedabad, Jaipur Branch	Office of the Director General of Commercial Audit, Chennai	Indian Audit Office, Kuala Lumpur
<p>The office carried out remote audit of the financial statements of Oil and Natural Gas Corporation Limited (ONGC) for the financial year 2019-20. The office obtained access to ONGC's SAP ERP system and DISHA portal (paper less e-office) which enabled this audit.</p>	<p>The office of the AG (Audit-I) Rajasthan completed the audit of 83 units of Rajasthan State Legal Services Authority (RSLSA), District Legal Services Authorities (DLSAs) and Central Jails remotely during the lockdown and post lockdown period.</p>	<p>The office carried out remote audit of the financial statements of four central autonomous bodies, most notably of Indian Institute of Management, Udaipur, for the year 2019-20, as the office was able to access their ERP (Microsoft Dynamics AX).</p>	<p>The office carried out a remote audit of the financial statements of the units of National Thermal Power Corporation Limited, located at Ramagundam in Telangana, Simhadri in Andhra Pradesh, and Kudgi in Karnataka, for the year ended 31 March 2020, on their ERP platform.</p>	<p>Covid-19 pandemic severely impacted travel. The office managed to discharge its audit responsibilities by carrying out remote audits of offices at Singapore, Jakarta, Seoul, Bangkok, Melbourne, Sydney, Tokyo and Yangon.</p>



## **Technology in Business Processes**

**The CAG's organisation has been a pioneer in leveraging technology in internal work processes. Even before State Government Integrated Financial Management Systems took root, in the late 1990s the organisation successfully implemented Voucher Level Computerization in Accounts and Entitlement Offices across all the States, which involved digitizing physical voucher and challan data of State Governments to prepare State Finance and Appropriation Accounts.**

**This section elaborates recent strides in business process re-engineering which are contributing to efficient work processes.**

# One IAAD One System-sprinting to deliver quality service

**O**ne IAAD One System (OIOS) is the flagship project of the CAG's organisation. It is a state-of-the-art, end-to-end IT solution, with seamless integration and process workflow. It will be one of the most modern digitalisation projects of core audit activities of the CAG's organisation.

The application spans the entire gamut of audit processes of the organisation, with potential to integrate accounting functions as well.

Audits conducted by the organisation spread across various verticals like State Government Audit, Central Government Audit, Railway Audit, Defence Audit, Audit of PSUs, Autonomous Bodies etc. Hence, the solution is being developed simultaneously to be 'one size fits all' as well as 'bespoke/configurable' to cater to all the variations in individual audit offices.

The solution also cannot be complex, as it must be accepted by the user community (29,000 users), whose IT skills are at different maturity levels. The Project is being currently implemented in 73 field audit and their branch offices.

The offices have been able to bring in the basic master data information (organisation structure, employee, and auditee universe), giving an integrated and formal view of the wide mandate and audit universe of the CAG's organisation.

## Key Drivers

- **Committed Leadership:** CAG and Senior Management's support has been critical to the project.
- **Choice of technology stack:** Open standards, open architecture, and open data model
- **Agile methodology:** Development broken down into smaller modules and in shorter cycles.
- **Pay it forward:** The team leaders hand hold and empower the team members. They in-turn handhold the functional helpdesk, who empower the nodal team of the field offices. The nodal team pays it forward by handholding their office through the change.
- **Continuous stakeholder engagement:** Especially with the user community
- **Staged acceptance for quality:** The project envisages a three-stage acceptance, Stage 0 by the OIOS team, Stage 1 feedback from the pilot offices and Stage 2 feedback from the nodal offices after using the application.

Currently, the office structure (387 wings, 1,412 branches, 2,370 sections and 6,437 dealing hands), 16,518 employees, 510,414 auditee entities and 91,142 legacy observations are part of the application. Around 102,830 audit observations have been raised across 4,289 field audits so far using the application.

The striking innovation which facilitated improvement is the adoption of Agile methodology for software development, which is a significant departure from the normal Waterfall methodology, hitherto in vogue in the Government for IT systems development. The Agile methodology uses an iterative method, with a constant cycle of production, implementation and feedback to add more functionalities and improve the system. The approach involves development and implementation through sprints (which is typically two to four weeks long). It allowed the application of this magnitude to commence implementation in a phased manner in pilot and nodal offices, within 6 to 10 months of the start, as against at least 2-3 years normally taken in a waterfall-based development.



**Inaugural of 'Go Live' of OIOS by Comptroller and Auditor General of India**

# OIOS functional helpdesk

An innovative solution was designed to develop and empower a team of officials from across the country to form a functional help desk that engaged proactively with all users being onboarded. A ten-member team was constituted, with members who had the right skill set- domain knowledge of audit processes, IT skills and training/mentoring skills to function as a help desk to implement OIOS. The group members are posted in various training institutes across the country.

The members of the helpdesk were trained in all the three OIOS components, the business process management module, the knowledge management system module and the reporting module. They were also trained in interactive voice response system IVRS, video conferencing, ticketing tool to equip them to fulfil their role.

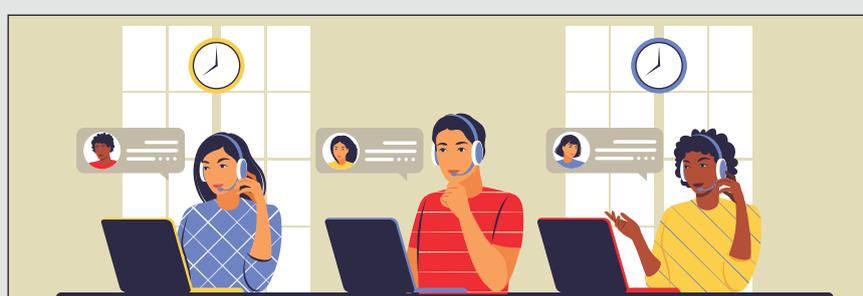
## Strengths of the functional helpdesk

- Enhanced accessibility of support persons
- Faster delivery of change
- Distributed ownership of project
- Reduced reliance on System Integrator and external vendor
- Symbolises collective commitment to projected from the nodal offices after using the application.

The functional help desk of OIOS is playing a critical role in equipping the organisation in adopting change and moving forward. The helpdesk members, assist the field offices to implement OIOS in their offices in a time bound manner. They train and empower the OIOS administrators in the pilot offices, provide practical workarounds until the concern is resolved and validate the master data and legacy data of the field offices. With their effort, phase I of OIOS has been implemented in 73 field audit offices and around 7,000 officials of the organisation have been trained within a short span of nine months.

The team members act as a bridge between the organisation and the system integrator and facilitate faster delivery of change. Also, because the team is mostly internally sourced, their continuous service delivery minimises dependence on the system integrator/ external vendor.

The efforts of the helpdesk team exemplify the role of smart change management in ensuring successful adoption of change and usage of change within the business. Their continuous online service delivery throughout project implementation despite the challenges during the mandatory Covid-19 lock down has helped to keep up the momentum of digitalisation journey of the organisation.



# The Data Lab

Data analytics in audit (for deriving insights from granular data to improve risk-based audit planning, detection of anomalies/ outliers for focused audit execution) has gained considerable importance with the increasing breadth and variety of data sources in public administration.

**Centre for Data Management and Analytics (CDMA)** was established in June 2016, based on the recommendations of the Task force on Implementation of Big Data Management Policy. CDMA is the nodal center for data analytics in the organisation and provides guidance to field offices on data analytics. It pioneers research and development on future direction of data analytics.

CDMA was envisioned to develop a single point solution for handling data dumps in CAG's organisation, involving creation of different environments at only one site which could be utilised by all audit offices. CDMA has since then grown in vision to support field audit offices through its model of Data-as-a-Service (DaaS) and Data-Analytics-as-a-Service(DAaaS), which has been realised through various projects being undertaken as episodic and continuous projects.

## Episodic Projects

Data Analytics on the below centrally sponsored schemes:

1. Data Analytics of Pre and Post Matric Scholarship Schemes (SCs, STs and Minorities)
2. Data Analytics of Ayushman Bharat/Pradhan Mantri Jan Arogya Yojana (PMJAY)
3. Data Analytics of National Social Assistance Programme (NSAP)

## Continuous Projects

VAHAN (Registered vehicle database) & SARATHI (Driving license database):

The first project pertains to VAHAN and SARATHI data of Ministry of Road Transport and Highways (MoRTH). CDMA has got access to all-India data of VAHAN & SARATHI every six months, based on an agreement with MORTH.

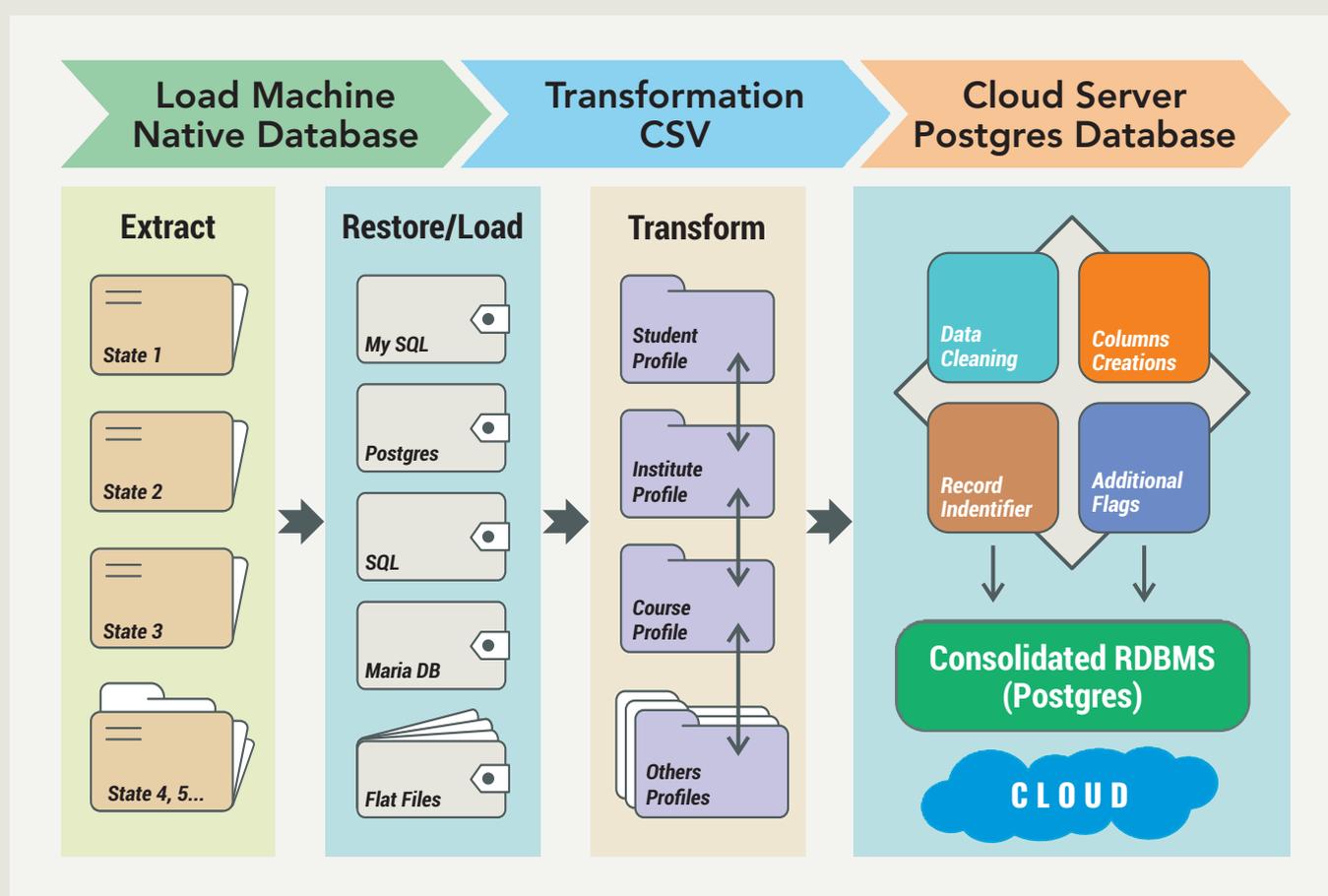
The data, data analytics model and SQL (Structured Query Language) queries are regularly shared with more than 20 field audit offices half-yearly and audits have been undertaken and reported.

## Creation of Single RDBMS (Relational Database Management System) of SC/ST Scholarship Data from hybrid set of database

CDMA has implemented Machine Learning, Artificial Intelligence and other Statistical methods during the data analytics of scholarship data and National Social Assistance Programme data.

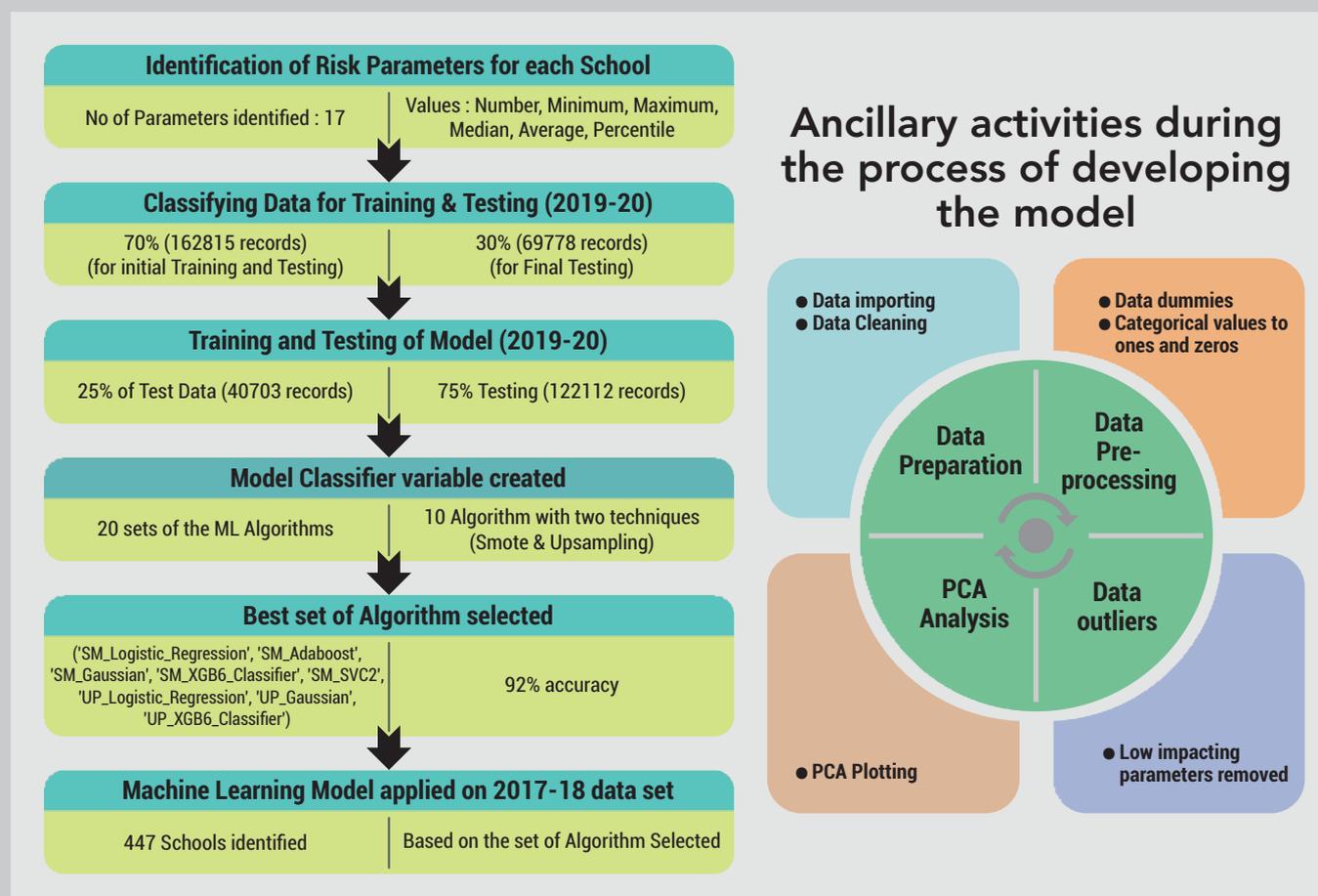
Data received from over 30 State/UT Governments was cleaned and transformed, and an all-India database was created containing relevant columns and in uniform structure. Data preparation and data cleansing was done by preparing institute profile and student profile across all the three years 2017-18 to 2019-20. The data received from States were in different formats/ RDBMSs. Hence, data preparation was done to consolidate these data and transform to a uniform structure to aid analysis.

The overall process of data collection, extraction and cleaning is shown in the below diagram:



The analysis of the data covering hybrid set of 93 databases/RDBMS of more than 20 TB, was a difficult task considering the complexity of the structures and volume of extractions and its consolidation to a single RDBMS.

## Machine Learning Model for detecting high risk schools for Pre-Matric Scholarship Scheme-the schematic gives the steps followed in the analytics



The solution based on the Machine Learning Model is exceptional since manually it was not possible to identify high risk schools due to time constraint.

CDMA has also been supporting and hand holding data analysis work during various Information Technology Audits and performance audits carried out by various audit offices on a regular basis. Under the capacity building programme, CDMA provides regular training on various data analytical tools to the audit offices and international audit teams.

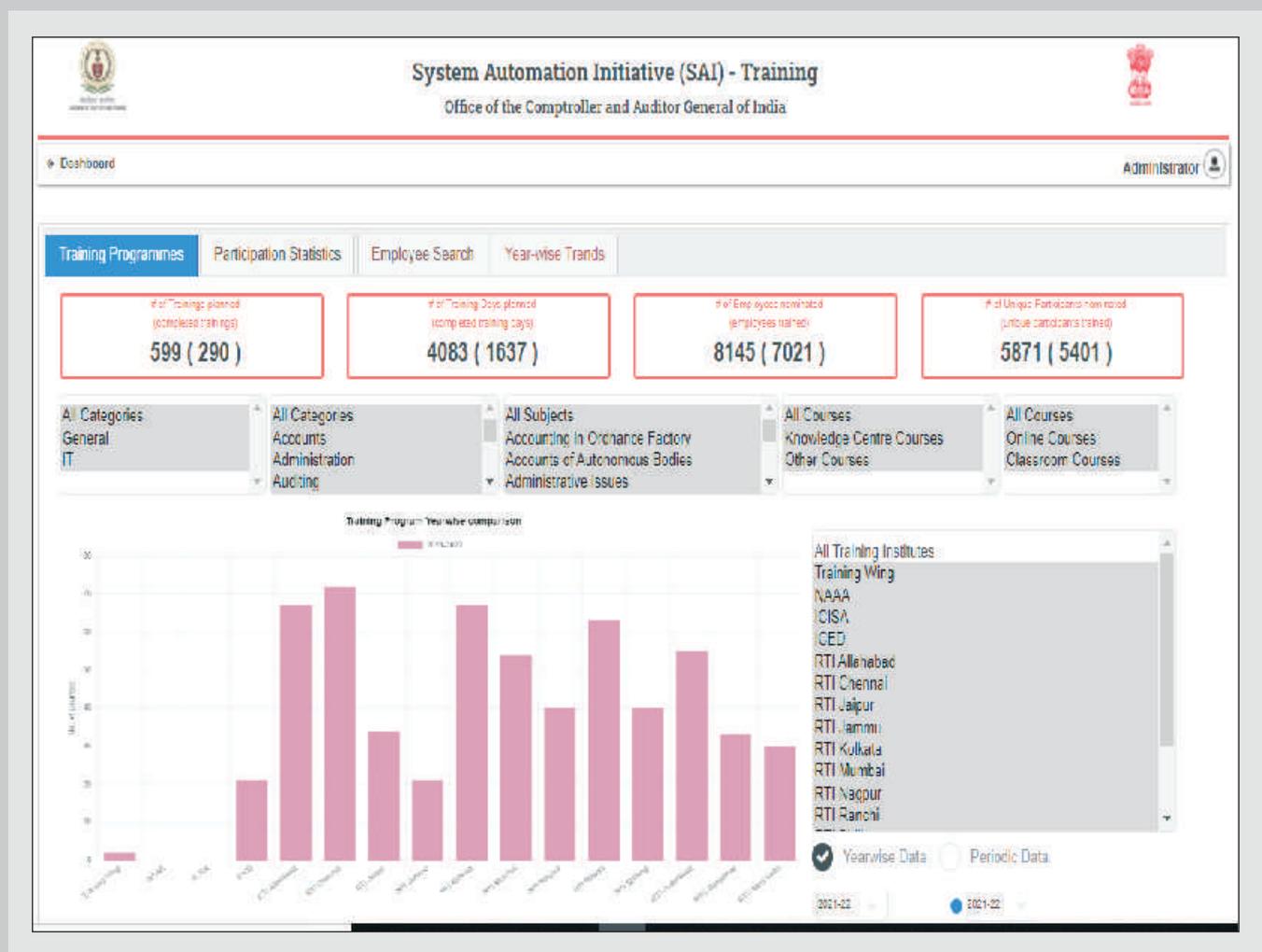
The model and the developments, as above, were presented in the 8th ASOSAI (Asian Organisation of Supreme Audit Institutions) Symposium and details are hosted in their website.

# Digitalisation of Training Workflow

The **Training Wing** at CAG office launched a System Automation Initiative Training (SAI Training) portal, which is a technology-driven initiative to automate the complete workflow of administrative activities connected with training activities in the entire CAG's organisation.

The portal was conceptualised in June 2019, and the first phase was rolled out pan-India on 1<sup>st</sup> January 2020. The development of the second phase was initiated in January 2020 and completed in October 2020. The full module has been under implementation since April 2021.

The project was entirely driven and developed in-house, using open-source technology making it a mostly zero-cost venture. It is one of the first in-house developed application that includes every single employee of the organisation as its user.

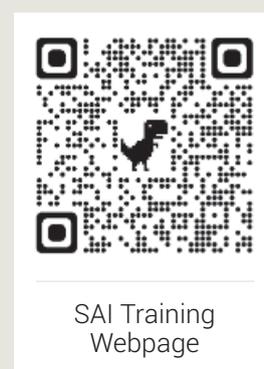


The training database existed in a decentralised manner digitally or otherwise in training institutes and user offices before implementation of the portal. However, training material was not easily accessible for future reference. Administrative activities linked to training were cumbersome and time-consuming for both training institutes and user offices. Considerable resources were spent in Training Need Analysis, nominations, attendance management, registration, feedback, etc.

## **Solution & benefits to stakeholders:-**

The portal has been built to provide easy access to information, reducing man-hours in administrative activities related to training and including employees in the capacity building process. It is designed as a one-stop solution for capacity building activities in the CAG's organisation with a comprehensive database of employees, training data, faculty, and training materials. About 1,100 trainings, including in-house training, have been organised through the portal. Benefits of digitisation in various stages of training administration through SAI Training Application (such as nomination, registration, feedback forms, reports and returns etc.) has resulted in significant reduction in paper work and saving of resources. SAI Training has successfully handled concurrent connections from many users located at different geographical areas. Automation of communication through e-mail and SMS to the stakeholders in all pertinent processes provides them with instant information and alerts.

Pilot runs were carried out in a phased manner before the final pan-India rollout. Continuous engagement with stakeholders at all levels, the application's user-friendly interface and a robust help desk were key enablers of change.



# 100% Digitalisation of Rajbhasha work at CAG Headquarters



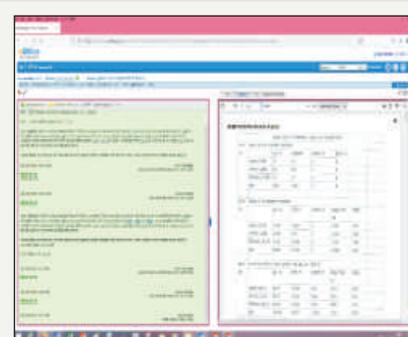
Rajbhasha Kirti Puraskar, First Prize, 2020-21



e-magazine



e-trainings, e-inspections



100% e-office implementation

# Digitalisation drives smarter service delivery

## General Provident Fund

The **Office of the Accountant General (A&E), Tamil Nadu**, carried out successful business process re-engineering to simplify authorisation of final payments in respect of General Provident Fund of State Government employees, saving a few weeks in the process, bringing in lot of efficiency, and achieving better standards of service delivery.

The office authorised final payments on retirement of State Government employees which used to be sent to drawing and disbursing officers of the State Government office from where the subscriber demitted service. The drawing and disbursing officers then prepared the bills and sent them to Treasury Officers for payment.

The authorisations, in the manual process, were printed in triplicate, signed manually and physically dispatched to the respective recipients by the staff. In addition, subscriber intimation was also printed. Manual printing, signing, dispatch, correction, revalidations in case of any errors and postal transit took time.

The workflow was re-engineered and now the office sends an e-authorisation to the Treasury Officer directly for payment, thereby reducing an intermediary layer. The drawing and disbursing officer was delinked from preparation and submission of the final payment bills and instead was required to only send an e-debit note. The new process did not compromise the qualitative checks that were required to be exercised. A common intimation to the drawing and disbursing officer and the subscriber was also designed and uploaded on the AG office website, to be downloadable as desired. An SMS feature was also linked to this.

The advantages spoke for themselves as time and cost involved in printing, signing, and dispatching the authorisation physically, was saved. It also helped the exercise go-green and arrested delays on account of missing copies of authorisations. Re-validations, if required, were also e-enabled. The process, which was initiated in January 2020, was of great help during covid as payments could proceed unimpeded.

The project is an example of healthy co-operation between the AG office and State Government, whose concurrence, detailed orders and support was critical for the initiative. Discussions with major stakeholders, changes in underlying application, use of digital signatures and encryption, and overall a commitment to serve the subscribers more efficiently in a technology enabled environment, contributed to the success of this exercise.

## Pension Automation

The **Office of Accountant General (Accounts & Entitlements), Haryana**, was required to process around 1.75 lakh pension revision cases, consequent to recommendations of Pay Commission.

The challenge was to achieve timely delivery of mandated services and to overcome the difficulties in processing this huge volume of physical data. This encouraged the office to digitalise the entire task to deliver the results in time.

Online Diary Management System (ODMS), the web application developed with the assistance of National Informatics Centre (NIC), Haryana was rolled out in December 2018. The application is hosted on a public domain and can be easily accessed by the drawing and disbursing officer, the treasury officer and the pensioner. Implementation of the application facilitated easier data validation, eliminated chances of misplacement of document, got rid of postal delays and postal costs and enabled treasury officers, drawing and disbursing officers and the pensioners to view the status of a pension case.

### Components of ODMS

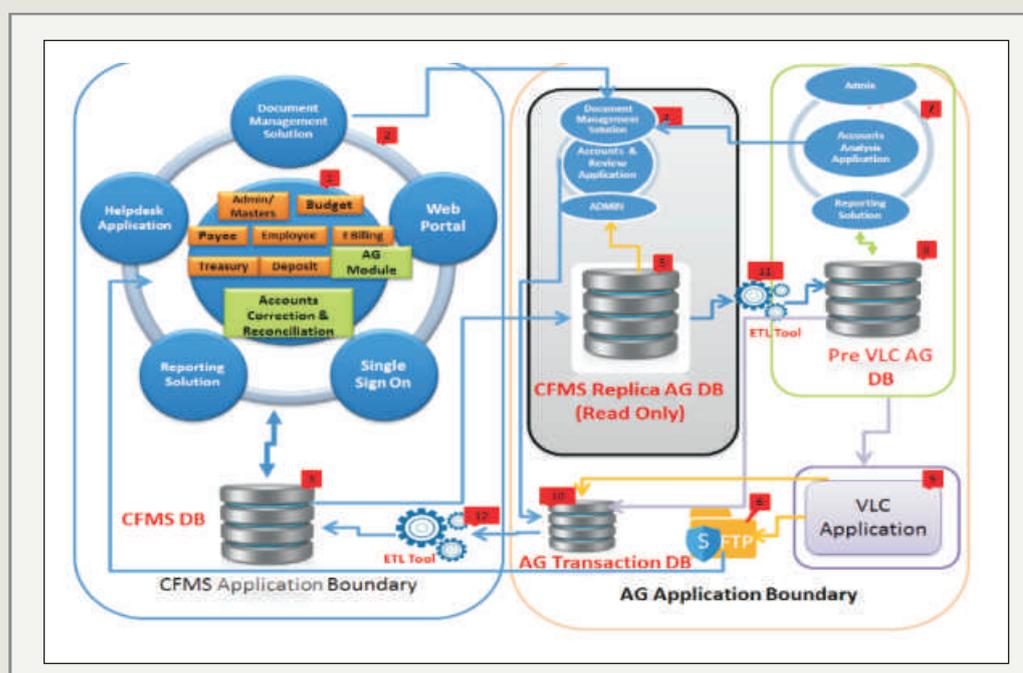
- e-PPO
- Online receipt of pension cases under revision
- Online processing of pension cases
- Online authorisation of pension payment orders
- Digitisation of pension data
- Pension data integration from various resources

Automation of pension work process through ODMS reduced the average process time from 28 days to 5 days. The dash boards provided for real-time monitoring of the work at various levels which further augmented the efforts in achieving timely high quality service delivery.

# Seamless connectivity with State Government Application

The **Office of Principal Accountant General, Accounts and Entitlement, Bihar**, has enhanced work process efficiency by integrating in-house Voucher Level Computerisation (VLC) application with 'Comprehensive Financial Management System (CFMS)' of the State.

The office had been receiving over 3 lakh vouchers and challans in physical form from account rendering units of the state. The office had to create facilities to store and maintain these documents. Also, considerable manpower had to be dedicated towards data entry of voucher details in the system, which



left little time and resources for validation of vouchers. Ensuring accurate data entry was a challenge as the task was repetitive and mundane. Further, some account rendering units were not submitting the accounts on time which affected the accuracy of the accounts to this extent.

The office integrated the workflow with CFMS to overcome the above challenges. A dedicated module was developed for the Accounts Office (Accountant General Module) on CFMS.

## Impact

- Eliminating treasury suspense
- Doing away with manual data entry
- Enabling timely generation of accounts
- Freeing manpower for greater focus on carrying out validation checks on vouchers
- Ensuring completeness of accounts and enhanced accuracy of accounts and reporting

# The reconciliation project and digital drive - 'Sanjog'

Departmental Reconciliation of Accounts is one of the most significant control mechanisms that enhances the accuracy of accounting data used to prepare the annual accounts of the State Governments. Complete lockdown caused by the covid pandemic, the inability of State Government Departments to visit the **Office of the Principal Accountant General (Accounts and Entitlement), West Bengal**, jeopardized the reconciliation of accounts.

This office developed a Reconciliation Module leveraging the office website. The coding was done fully in-house using open-source solutions, without any expenditure or external technical assistance. The module enabled the office to successfully attain 100% revenue and 99.96% expenditure reconciliation in 2019-20 and 100% revenue and 100% expenditure reconciliation in 2020-21.

Further, the office started other initiatives like upgrading the website to a dynamic website, digitisation of records and implementation of e-office. Departmental users of the State Government were provided online login facility. A summary of work status of all the treasuries has been displayed on the dashboard along with the facilities of viewing and downloading treasury review reports, office orders and treasury-specific office orders, treasury inspection reports, accounts correction and missing vouchers on the website.

The office also leveraged the office website for providing modules for various stakeholders (3 lakh GPF subscribers, 25,000 pensioners annually, 1,000 office employees, 91 state departments etc.).

Further, the office implemented the website in local language for the benefits of stakeholders. Conversion of all static content in local language was the main challenge and the same was done successfully by the in-house team.

The Office in coordination with State Archival library, prepared archive facility within the office website, where AG Manuals, Finance Accounts, Appropriation Accounts, since 1870s were uploaded. This enables various officials, researchers, and scholars to access financial history of the State.

## Benefits to stakeholders

- Interaction of State Government with the accounts office without physical visit during the pandemic.
- Ready availability of online past referencing.
- Augmenting the 'Single Source of Truth' related to State's integrated financial management system
- Additional functionalities like statement of expenditure, monthly civil accounts, contingent bills, orders regarding loans and advances are available.
- Treasury officers are able to upload documents like missing vouchers, plus minus memos etc.
- Saves time and effort by reducing physical presence.

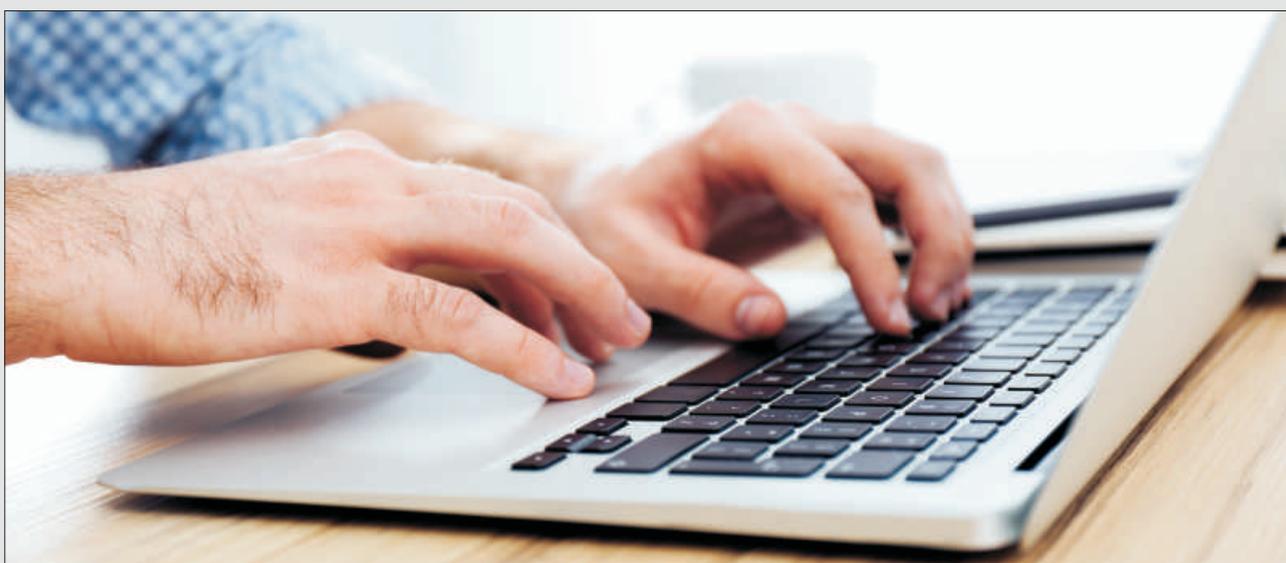
# Information Systems Wing- the Enablers

The disruptions caused by Covid-19 pandemic were a test of resiliency for the whole of Government. To bring about organisational-level changes for an organisation as large as that of the CAG of India, transitioning from a pre-dominantly manual work environment to online was a mammoth task.

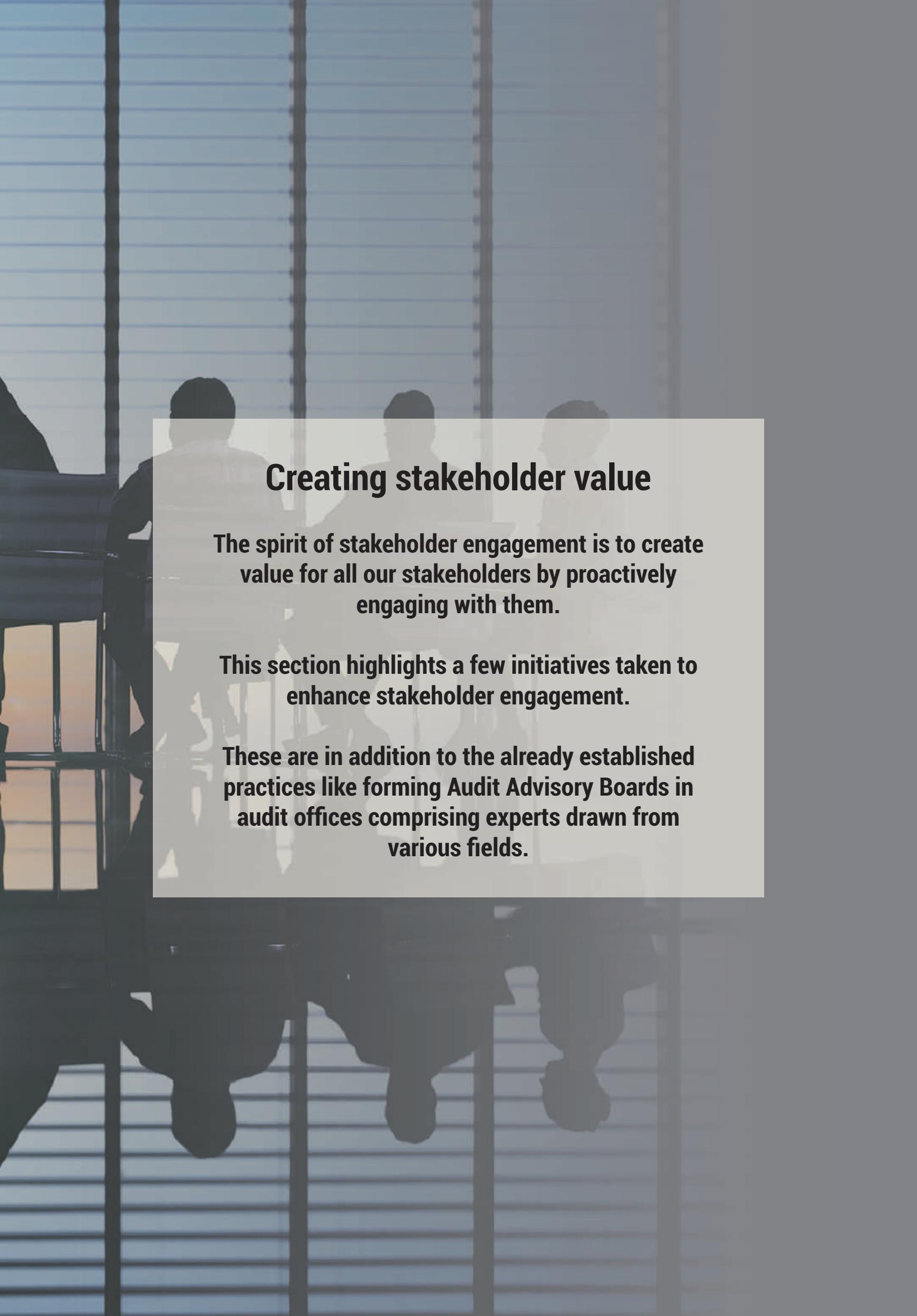
The **Information Systems Wing** identified quick, ready to use IT solutions, and focused on extensive training and handholding. The wing was able to make Microsoft onboard CAG's organisation as one of its initial partners in India, and it also offered free MS Teams License (8,000 trial licenses for six months) to the organisation. Moreover, in line with Government of India instructions, the Wing was able to get a separate domain allocated for CAG's organisation from Microsoft that gave reasonable assurance that the organisation's documents were stored within India.

Training institutes were provided with licenses for Microsoft Teams application. The faculty members in training institutes were initially trained to use this application. They in turn then served as trainers to onboard the employees of other CAG organisation's offices.

Currently around 60 offices are using e-office to various degrees and about 34,000 files have been processed in e-office. CAG's organisation is a large user of e-office across central government departments. E-office was designed to be accessed from the NIC network. Thus, it could be accessed only through CAG's organisation net in offices. In the wake of the lockdown, it was not possible to access it from home. To enable work from home, in association with NIC, the Information Systems Wing information on systems provided virtual private network services to employees. Within a short period of time the Wing created email IDs for all (about 40,000) employees of the organisation to enable everyone to participate in the digitalisation journey.







## **Creating stakeholder value**

**The spirit of stakeholder engagement is to create value for all our stakeholders by proactively engaging with them.**

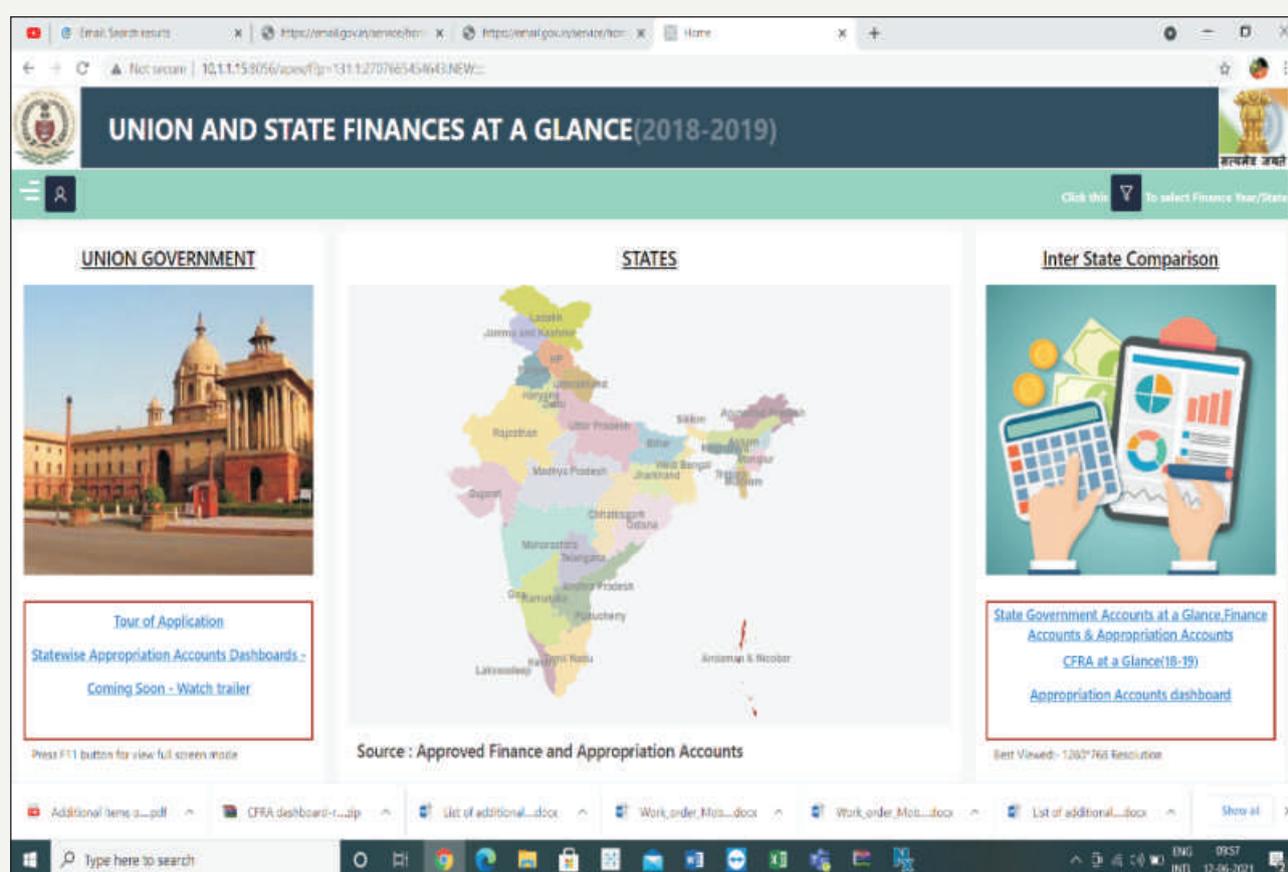
**This section highlights a few initiatives taken to enhance stakeholder engagement.**

**These are in addition to the already established practices like forming Audit Advisory Boards in audit offices comprising experts drawn from various fields.**

# Interactive dashboards and Process Re-engineering

The Combined Finance and Revenue Account, published by the Comptroller and Auditor General of India, is a unique document that brings together disaggregated annual audited figures of receipts and disbursements of Central Government and all State Governments and Union Territories in one place. It is widely read and accessed by not just Governments but the Reserve Bank of India, analysts, researchers, both within and outside the country for obtaining fiscal statistics.

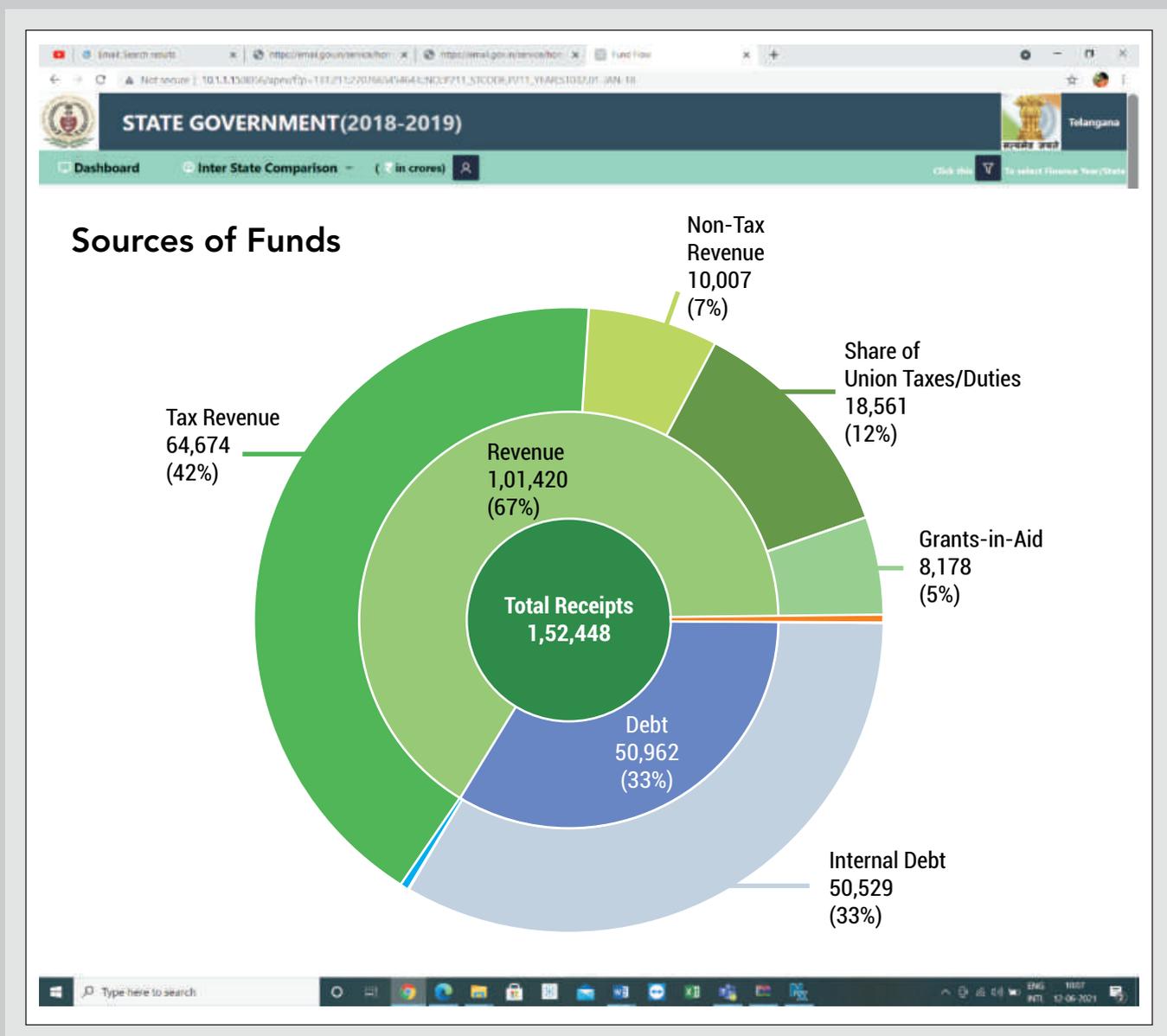
In 2020, **Government Accounts Wing at the CAG office**, presented the information contained in the Combined Finance and Revenue Account, in an interactive dashboard. The data visualisation efforts make the navigation very easy, provide the user with a quick and clear understanding of the information and aids deeper data analysis. Besides, displaying financial information up to the major/minor head level of the States and the Union, the dashboard facilitates trend analysis and interstate comparisons on a set of significant fiscal parameters.

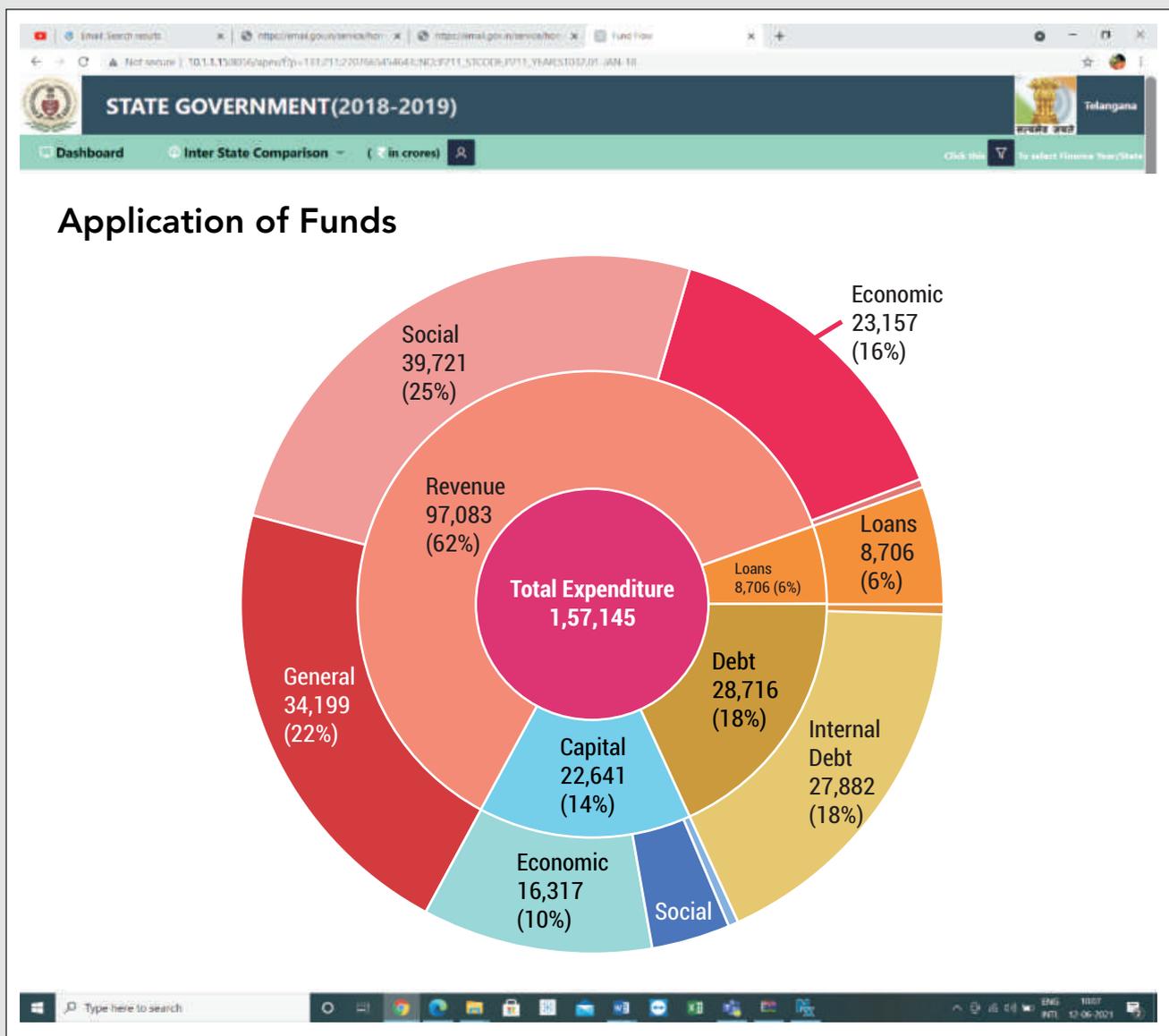


The Government Account Wing also presented the Appropriation Accounts of all States in an interactive dashboard. The dashboard provides grant-wise expenditure data. Users can drill down to the object head (activity) to perform detailed analysis and to link the data with the end purpose for which the amount was spent. This was an in-house project completed in March 2021 after carrying out a pilot study with the accounts of Haryana. The dashboards handle data for 5 years from 2014-15 to 2018-2019.



Scan to access Dashboards





The Government Accounts Wing further re-engineered business processes and used information technology to enhance quality and ensure the timely finalisation of account of State Governments for the year 2019-20 and 2020-21, despite the challenges posed by Covid-19 pandemic. The initiatives included

- treasury inspection in e-environment;
- use of concordance table to facilitate translation of states' fiscal data into Government Financial Statistics Manual - 2014 of International Monetary Fund;
- devising control checklists for Finance Accounts and Appropriation Accounts;
- issue of guidelines on validation of vouchers, operation of personal deposit accounts and accounting of reserve funds;
- extensive online training of core teams in Accounts and Entitlement offices.

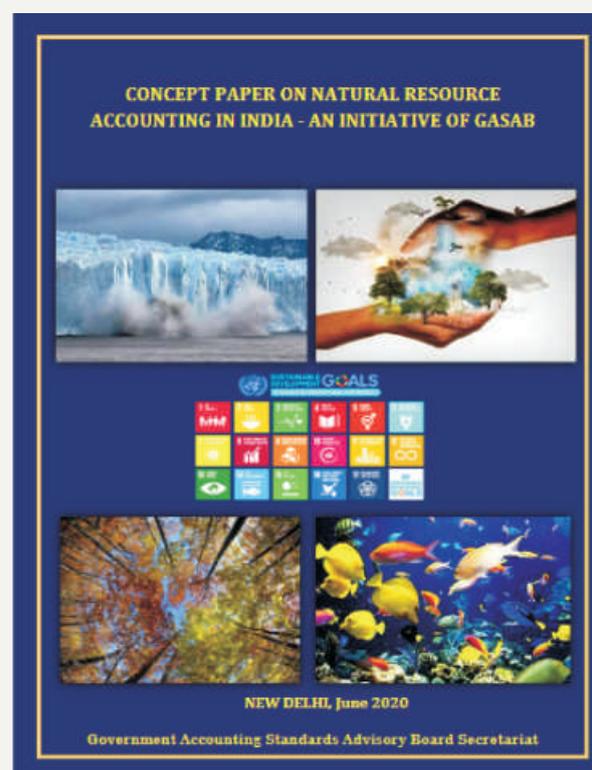
# Concept paper on Natural Resource Accounting

**G**overnment Accounting Standards Advisory Board was established in 2002 by the CAG of India and it is headed by Deputy Comptroller and Auditor General (Government Accounts). It is mandated with the responsibility of formulating, proposing, and improving the standards of government accounting and financial reporting. It comprises representatives from Central and State Governments, the Reserve Bank of India, the Institute of Chartered Accounts of India and other professional bodies.

In 2020, Government Accounting Standards Advisory Board released a Concept Paper on Natural Resource Accounting. The Concept paper discusses the landscape for the implementation of natural resource accounting. In the context of ongoing efforts by the country

to implement natural resource accounting, the paper provides comprehensive information on preparing Natural Resource Accounts.

The paper which was digitally launched by the then Minister of State of Environment Forests and Climate Change was widely appreciated by the key stakeholders. The successful generation of Asset Accounts on natural resources both in physical and monetary terms, as advocated in the paper, would enable India to enter the group of elite countries which have already adopted the 'System of Environmental Economic Accounting' framework.



Scan to access  
Concept Paper

# Every citizen is a stakeholder in audit

The Office of the Principal Accountant General (Audit-I), Rajasthan, took (2017) a novel step by publishing an advertisement in leading newspapers of Rajasthan seeking public input on the following citizen-centric issues:

- Management of Drinking Water;
- Crime against women including dowry;
- Management of solid waste;
- Functioning of Gaushalas (Cattle shelters)
- Efforts to popularise Ayurvedic Medicines
- Employment Generation
- Jaipur Metro System

Public participation helped in understanding the concerns of the citizens, thereby adding more value to audits undertaken.

The office also held seminars with stakeholders at the gram panchayat level to understand their grievances in respect of the welfare schemes and other administrative issues faced by them. Inputs from ground level functionaries helped to establish synergy between performance/thematic audits and social audit. The stakeholders included Ms. Naurati Devi (Ex-sarpanch of Gram Harmada, Ajmer), the first Dalit sarpanch to run a village with computers at the age of 70 and Ms. Chhavi Rajawat (Sarpanch of Gram Soda, Malpura), the first woman sarpanch with a Masters' degree in Business Administration.

**आम जनता हेतु महत्वपूर्ण सूचना**

**प्रधान महालेखाकार (सामान्य एवं सामाजिक क्षेत्र लेखापरीक्षा) कार्यालय, राजस्थान, जयपुर**

यह कार्यालय चालू वर्ष के दौरान निम्नलिखित नागरिक केंद्रित विषयों पर निष्पन्न लेखापरीक्षा (परफॉर्मन्स ऑडिट)/थैमैटिक लेखापरीक्षा (थीमैटिक ऑडिट) संपादित करेगा :-

1. राजस्थान में पेगजल का प्रबंधन
2. राजस्थान में दहेज सहित नविलाओं के रिजर्व अपराध
3. ठोस कचरे का प्रबंधन
4. गौशालाओं (पशु आश्रयों) की कार्यप्रणाली
5. मनरेगा की कार्यप्रणाली
6. राजस्थान में आयुर्वेदिक दवाओं को लोकप्रिय करने के प्रयास
7. राजस्थान में रोजगार सृजन
8. जयपुर मेट्रो प्रणाली

लेखापरीक्षा किये जाने वाले मुद्दों को समाजिक हितधारक जन के साथ संबंधित नागरिकों एवं संगठनों, जो इस क्षेत्र में कार्य कर रहे हों, के साथ विचार किया जाएगा। इस संबंध में, उपरोक्त विषयों के संदर्भ में किसी ऐसी विशिष्ट समस्या/मुद्दे, जो आपको या आपके घरों और के वातावरण को प्रभावित कर रहे हों, जनहित में हों एवं प्रशासन में सुधार के लिये आवश्यक हों, हमें निम्नलिखित तरीकों से अवगत करा सकते हैं:-

ई-मेल [agaurajasthan1@cag.gov.in](mailto:agaurajasthan1@cag.gov.in)  
 पत्र व्यवहार का पता प्रधान महालेखाकार ( सामान्य एवं सामाजिक क्षेत्र लेखापरीक्षा ),  
 राजस्थान, जनपथ,  
 जयपुर -- 302005

प्रधान महालेखाकार ( सामान्य एवं सामाजिक क्षेत्र लेखापरीक्षा )  
 राजस्थान, जयपुर ।

**Important Notice for Public**

**Office of the Principal Accountant General (General & Social Sector Audit), Rajasthan, Jaipur**

This office will be conducting Performance/Thematic Audits in Rajasthan on the following citizen centric topics during the current year.

1. Management of drinking Water in Rajasthan
2. Crime against women including dowry in Rajasthan
3. Management of solid waste
4. Functioning of Gaushalas (cattle shelters)
5. Functioning of MNREGA
6. Efforts to popularize Ayurvedic Medicines in Rajasthan
7. Employment Generation in Rajasthan
8. Jaipur Metro System

The issues for examination by audit will be drawn up in consultation with all stakeholders including concerned citizens and organizations working in this area. In this connection, in case you want to draw attention to any specific problem/issue which is affecting you or the environment around you and is of public interest and would improve the overall governance, you can contact us at:

E mail: [agaurajasthan1@cag.gov.in](mailto:agaurajasthan1@cag.gov.in)  
 Postal Address:- Pr. Accountant General(G&SSA),  
 Rajasthan, Janpath,  
 Jaipur-302005

Principal Accountant General (G&SSA), Rajasthan, Jaipur

## From citizens-to-citizen's representatives

CAG's audit reports are discussed by the Parliamentary and Legislative committees after they are tabled. The Committees consist of Members of Parliament or Members of the State Legislature as the case may be. The Committees examine the audit reports, conduct meetings, make recommendations on the audit findings and finally monitor action taken on their recommendations.

The **Offices of the Principal Accountant General (Audit- I & II), Tamil Nadu**, conducted an Orientation Programme in August 2021 for the newly elected members of the legislative committees. The programme was presided by the Hon'ble Speaker of the Tamil Nadu Legislative Assembly. The Hon'ble Minister for Finance and Human Resource Management, participated as Guest of Honour and the Hon'ble Deputy Speaker of the Tamil Nadu Legislative Assembly participated as Special Guest. The chairpersons of the Public Accounts Committee, Committee of Public Undertakings and the Estimates Committee, Members of the Committees, and the Secretary of Tamil Nadu Legislative Assembly along with officials of the Secretariat participated in the programme.

The Members were apprised of the processes relating to audit planning, audit execution, various stages involved in the finalisation of audit reports, opportunities given to audited units to respond to the audit findings, constraints faced by Audit and possible remedies to resolve the issues.

The Members of the Public Accounts Committee and Committee of Public Undertakings and the Estimates Committee interacted and raised various queries regarding the functioning of the CAG's organisation, methodology used for finalisation of audit reports, CAG of India's Mandate and role of the Committees, etc.





## **International Relations and Good Practices**

**The CAG of India plays a leadership role in the international public sector audit community. In keeping with recognition of CAG of India's standing in the international community and global recognition of credentials, professionalism and experience of the organisations' personnel, CAG of India has been selected as External Auditor of several United Nations (UN) and international organisations over the years.**

**Current international audit portfolio of CAG includes audit of World Health Organisation (WHO), Food and Agriculture Organisation (FAO), Organisation for the Prohibition of Chemical Weapons (OPCW) and Inter-Parliamentary Union (IPU). CAG of India has also been recently selected as external auditor of International Atomic Energy Agency (IAEA) from 2022 to 2027.**

**The CAG of India also heads various committees and working groups of International Organisation of Supreme Audit Institutions and is a governing board member of the Asian Organisation of Supreme Audit Institutions (ASOSAI). The CAG has also been elected as the host of the 16 th ASOSAI Assembly in 2024 and Chairman of ASOSAI for the period 2024-27.**

**This section summarizes the key activities that has given the CAG of India a place of pride in the world.**

# International Role of **CAG of India**

**C**AG of India has been at the forefront of the international public audit arena by playing a pivotal role in the external audit of United Nations/ international organisations and by holding leadership positions in multilateral bodies including the International Organisation of Supreme Audit Institutions (INTOSAI) and Asian Organisation of Supreme Audit Institutions (ASOSAI).

## **External audit of United Nations/multilateral international organisations**

In recognition of the expertise and professionalism of its personnel, CAG of India has been selected as External Auditor of a broad spectrum of international organisations ranging from United Nations (UN), World Health Organisation (WHO), World Food Programme (WFP), Food & Agriculture Organisation (FAO), International Maritime Organisation (IMO) to International Atomic Energy Agency (IAEA), Organisation for Prohibition of Chemical Weapons (OPCW), etc. The recent appointment of CAG of India as External Auditor of IAEA has reinforced our global credentials and extensive experience of several decades in providing high quality external audit services to international organisations.

Furthermore, CAG of India is the Chair of the Panel of External Auditors of the United Nations, the Specialised Agencies and the International Atomic Energy Agency since 2020. As the Chair, CAG of India leads the Panel in enhancing co-ordination of audits for which its members are responsible, and in information exchange on audit methods and findings. CAG of India plays a vital role in ensuring that as external auditors to the United Nations and its Agencies, the Panel members' work adds value to the management of the client organisations and contributes to their increased efficiency and effectiveness.

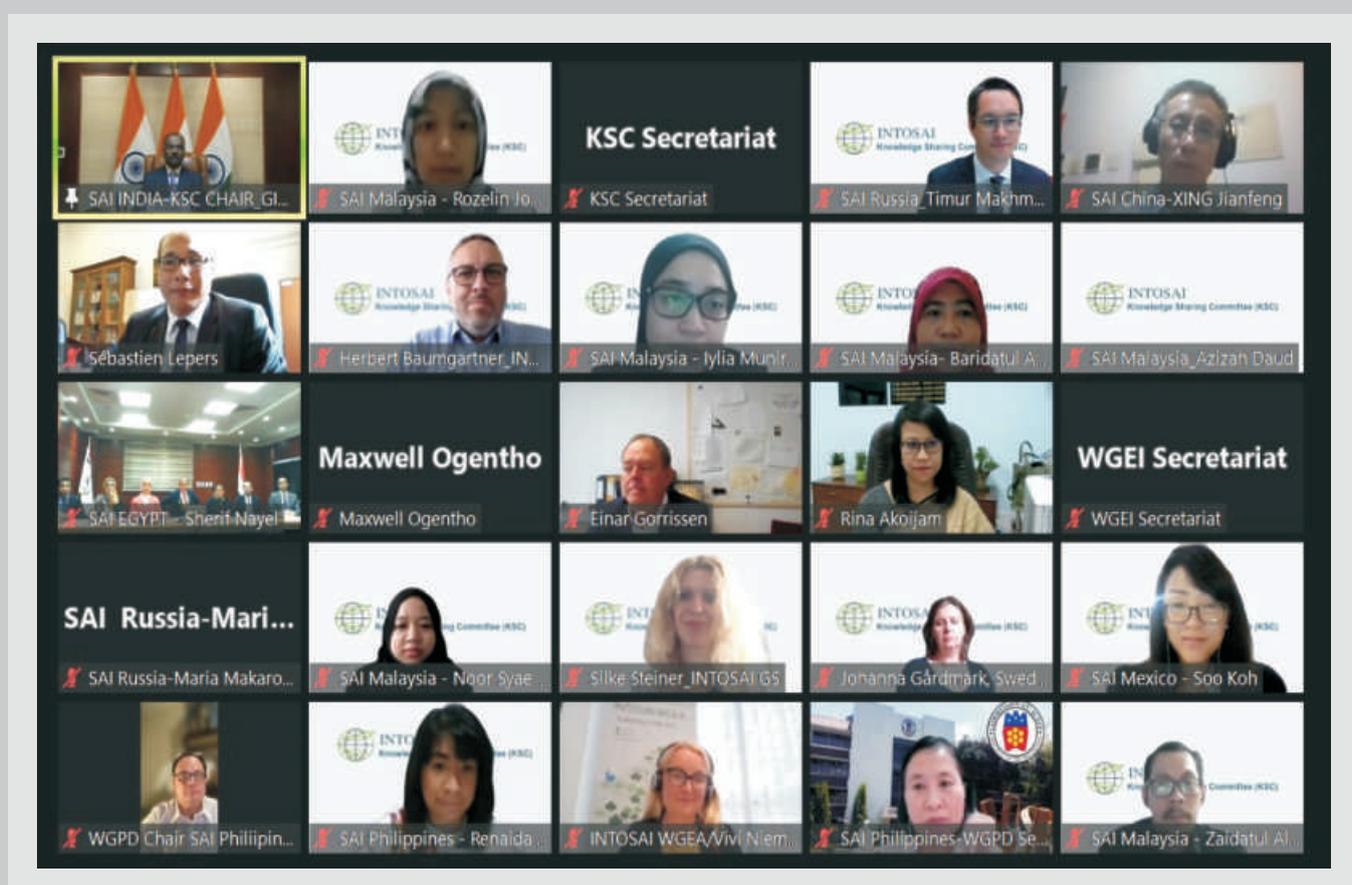
## **International forums**

CAG of India holds key positions in several Committees and Working Groups of INTOSAI and ASOSAI, in addition to providing strategic direction as Governing Board member in both these forums.

## International Organisation of Supreme Audit Institutions (INTOSAI)

CAG of India is a major contributor to the development of audit standards, guidance and practices in the international public sector audit community. CAG of India also plays a pivotal role in the promotion and transfer of knowledge to Supreme Audit Institutions for improving audit practices and enhancing audit capabilities. CAG of India is the Chair of the INTOSAI Committee on Knowledge Sharing and Knowledge Services (KSC), the Working Group on IT Audit (WGITA) under KSC and the Compliance Audit Sub-Committee. In this capacity, CAG of India has:

- Coordinated placement of five pronouncements in the INTOSAI Framework of Professional Pronouncements including on IT Audit, Audit of key national indicators, Auditing public debt and Auditing disaster management. The Guidance on IT Audit, a project led by CAG of India, is widely referred by the SAIs across the globe for benchmarking the quality of IT audits and for enhancing their institutional capacities. Through these initiatives, the Supreme Audit Institution (SAI) India is actively involved in the standard setting arena of public audit.
- Ensured formal adoption of 15 research papers and guidance material, relating to environmental audit, audit of extractive industries, IT audit, disaster management etc.



13<sup>th</sup> KSC Steering Committee Meeting- September 2021

- Released the INTOSAI Community Portal, developed and maintained by SAI India, for the benefit of international public audit community during the last INTOSAI Congress in 2019. The portal has been designed with an auditor centric approach to provide the field practitioners of public audit a platform to share knowledge. It is a single window access to various knowledge resources developed by the INTOSAI.
- Developed COVID-19 document "Compilation of organisational response within INTOSAI" containing the best practices adopted by various SAIs across the world to deal with COVID-19 pandemic and their audit related initiatives.

## **Asian Organisation of Supreme Audit Institutions (ASOSAI)**

CAG of India plays a prominent role in ASOSAI as its charter member since 1979 and has recently been elected as the host of the 16th ASOSAI Assembly in 2024 and Chairman of ASOSAI for the period 2024-2027. As Chair of ASOSAI for 2024-27, SAI India will lead initiatives to strengthen the knowledge sharing and capacity development amongst the SAIs of Asian region for the audit of environment, implementation of Sustainable Development Goals (SDGs) and use of IT and emerging technologies, natural resource accounting etc.

CAG of India has extensively contributed to ASOSAI by deputing its officers as experts, resource persons and mentors for the ASOSAI Pilot Capacity Development Program, Design Meetings, INTOSAI Development Initiatives-ASOSAI Blended Learning Specialist Certification Programmes, Seminar/Workshops, etc.

CAG of India is the Chair of the Board of Editors of the ASOSAI Journal and has successfully achieved the milestone of revamping the ASOSAI journal website. The revamped journal has been presented to the ASOSAI fraternity for paving way for ASOSAI to connect, share and lead better. A social media handle in Twitter has also been created for the ASOSAI Journal to increase its visibility and reach. CAG of India's vision to give a new impetus to this Journal and make it a dynamic medium to bring together the finest minds of ASOSAI to deliberate and share expertise, has been hailed by the ASOSAI Governing Board.

## Other multilateral forums

CAG of India is also an active member of BRICS SAIs (BRICS comprises Brazil, Russia, India, China and South Africa), Shanghai Cooperation Organisation (SCO) SAIs and Commonwealth Auditors General Forum.

In the 2<sup>nd</sup> Meeting of BRICS SAIs Leaders in August 2020, the CAG of India shared SAI India's response to COVID-19 expressing SAI India's efforts to implement strict nationwide lockdown and ensure adequate supplies of medical equipment and medicines. The member SAIs lauded the efforts of Indian authorities in preventing spread of the pandemic through its policies and timely measures. The members also appreciated SAI India's efforts in keeping the business going during these tough times and not letting its guard down.

## Bilateral relations

CAG of India has signed MoUs with 16 SAIs of Afghanistan, Bhutan, Brazil, Cambodia, China, Iran, Kuwait, Maldives, Mongolia, Oman, Poland, Russia, South Africa, Ukraine, Venezuela and Vietnam. Bilateral events are regularly conducted with SAIs of Bhutan, China, Kuwait, Oman and Poland under these MoUs.

CAG of India has also supported SAIs in being strong, resilient and agile to maintain their relevance to the stakeholders. In this endeavor,

- experts from CAG of India are seconded to other SAIs
- training programmes are conducted
- assistance is provided in preparing manuals and policies
- guidelines and hand holding support is offered in conducting audits



## **Welfare initiatives**

**"It is not enough to be compassionate. You must act."**

- The Dalai Lama

**This section contains various efforts made to enhance employee and social welfare.**

# Covid-19 management in the organisation and Office of the CAG of India

Unforeseen circumstances test the capabilities of an individual and the institution the most. The uncertain times of Covid-19 has brought many challenges related to infrastructure, testing, tracking, prevention, and issues related to the psychosocial environment to the fore. The **Headquarters Wing at the CAG office** met these challenges by

- disseminating timely and credible information;
- responding appropriately to the queries;
- proactive testing and tracking;
- providing pre-hospitalisation care/vaccination; and
- organising medical seminars

As early as 16 March 2020 detailed guidelines on 'Prevention of spread of Novel Coronavirus (Covid-19)' were issued to all offices in the organisation. Field offices were requested to display 'DOs' and 'DON'Ts' issued by the Ministry of Health and Family Welfare at prominent places to increase awareness about the pandemic. Instructions were also issued regarding avoidance of mass gatherings; holding of online meetings; exemption from biometric attendance; granting permissions to employees showing symptoms to work from residence, etc. Field offices were also directed to give all possible assistance to government authorities in their efforts in preparedness, control, and containment.

The preventive measures adopted were effective, but they could not completely stop spread of Covid-19 in our offices. Therefore, the office scrupulously made all efforts for contact tracing of such infected person after receipt of information of any positive Covid-19 case in the office or in their family. All officials who were in direct contact with Covid-19 positive person were quarantined immediately and the status of their health was monitored regularly. Similarly, the health status of indirect contact of covid cases was also monitored.

Emergency duty passes were issued to staff to maintain mobility in case of emergency to avoid delay in completion of urgent office assignments.

Doorstep delivery of essentials items was ensured during the period of lockdown/curfew in case of emergency. The headquarters office and the International Centre for Information Systems and Audit, Noida, also kept ready isolation care facilities for personnel and families with mild/asymptomatic cases where home isolation was proving difficult.

More than 2,500 RTPCR/Rapid Antigen tests have been conducted so far in the office as well as at residences of staff of the CAG office. This helped to identify and isolate Covid-19 positive employees and prevent the further spread of the disease.

A mass vaccination drive was commenced on 16 April 2021 in the new office premises in coordination with the state government authorities and private hospitals. The additional camp was set up in old CAG of India premises also. A mega camp was organised on 31 May 2021 in the new CAG building, which was inaugurated by CAG of India, wherein more than 600 CAG officials and their family members were administered a first dose vaccine.

During the peak of the second wave, an online session was organised on 26 May 2021 for all staff posted in Delhi/NCR to assist them in dealing with mental health issues caused by the pandemic. The session was spearheaded by Dr Nand Kumar, Professor, Department of Psychiatry, All India Institute of Medical Sciences, New Delhi. The video of the online session was also uploaded on CAG of India's website for benefit of the others.

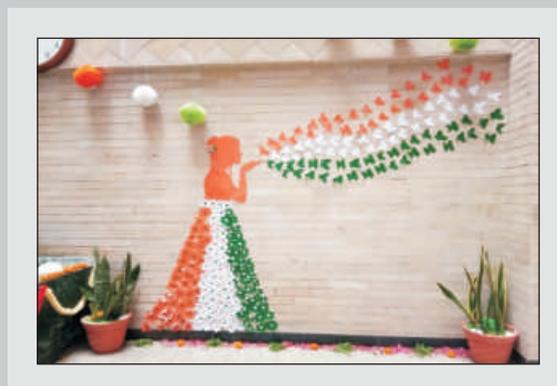
From 14 July to 19 July 2021, the antibody testing camp was organised for staff where more than 550 officials availed the facility.

The unstinting efforts of the teams involved in various other offices also deserve to be applauded. In the CAG office, the team which was most active in Covid-19 management was severely affected by the disease, yet their indomitable spirit prevailed.

# The greatest asset of an organisation are its people

In Government, there is a well-defined hierarchy and supervisory mechanism which helps maintain productivity at the workplace. However, the quality of work output increases manifold if the employees are healthy, happy, have a deep sense of ethics and feel a special bond with the organisation.

The **Office of the Principal Accountant General (Audit-II), Gujarat**, embarked on a journey to increase trust, confidence, and awareness of employees towards themselves and their surroundings. Activities, as described below, were undertaken towards disseminating thought-provoking and motivating messages, fostering pride in the community, and a feeling of belonging to an organisation that cares.



**Pride in nation and service:** Employees who retired in recent months were given the honour of hoisting the national flag.

**Awareness about Gandhiji, his life and values:** A Gandhi Corner was created in the office atrium to reinforce Gandhian values. The place contains an exhibition of posters from Gandhiji's life and a book "Gandhiji in Ahmedabad". These posters covering his life, ideals, and his stay at Ahmedabad are changed weekly and the cycle is completed in almost a year. The adjoining गांधी कक्ष (Gandhi Kaksha) houses Gandhi literature and even a small charkha (spinning wheel), that one can try for spinning.



The office also conducted an awareness quiz, poster making competition, and essay competition about Gandhiji. Officials were also encouraged to participate in an exam regarding awareness about Gandhiji, organised by the Gujarat Vidyapeeth, which was founded by Gandhiji. This office has continued “Swachchhta Abhiyan” every year on the eve of the Gandhi Jayanti.

**Environment awareness:** The employees contributed significantly towards the plantation and rejuvenation of the rainwater harvesting system. Outside the Bopal colony, in a vacant plot belonging to the office, 152 saplings were planted in July 2019. In the last three years, 2,040 trees have been planted in the Bopal colony, while 837 trees and 1,327 flowering plants have been planted in the office premises.



**Inculcating reading and writing habits:** A reading room cum library was inaugurated by the Comptroller and Auditor General of India during his visit to this office in January 2021.



**Awareness about physical and mental health:** Specialist doctors were invited to the office to raise awareness on possible health problems and ways for healthy living. Experts on yoga and naturopathy were also called for suggesting improvements in health and lifestyle. Yoga sessions are regularly organised by an in-house certified yoga trainer. A database of the blood group of all employees was prepared to meet emergency requirements.



# Sustainability **journey**

The Office of the Principal Accountant General (Audit-I), Madhya Pradesh, led the sustainability journey this year, adopting green initiatives at the workplace.

## Organic Waste Converter

Waste collection and processing had been an issue in the office premises and the adjoining residential premises. The office installed an organic waste converter to convert the entire waste to good quality compost. This is in line with Smart City Mission of Government of India.

The waste converter aids in achieving “zero waste generation target” of the office.

## Solar Photovoltaic Power Plant

The office embraced clean energy by installing a roof top solar photovoltaic power plant, which also helped in saving electricity bills. Further, Roof top Solar is one of the components of National Solar Mission, the key Renewable Energy initiative of the Government to minimise carbon footprint and battle climate change. The office adopted Renewable Energy Services Company (RESCO) Model.

The solar power plant is of 170 KW in capacity

# Sahyog - An example in 'Outreach'

The **Office of Principal Accountant General (Audit) Uttarakhand** provided a platform, 'Sahyog', for employees' cooperation during the Covid-19 pandemic. The group made appeals to the volunteers for contribution in terms of money and effort. With the money collected through voluntary contributions, Sahyog reached out to the vulnerable.

- **Food Items:** Information about nearby localities where daily wage earners, labourers and families who were facing scarcity of food and other needs were collected. The office provided ration to about 80 such families during the Covid-19 pandemic first wave. Till the Unlock 5.0 phase October 2020, 'Sahyog' had provided about 1,200 packets of ration to about 80 families for a period of 115 days.
- **School Fees:** School fees were provided for the children of contractual staff, guards, sweepers, garbage collectors, etc. working in the Mahalekhakar Bhawan and the residential complex. Since October 2020, 'Sahyog' has been supporting 13 such children with their school fees.
- **Blankets to support staff and homeless:** Blankets were provided to all the above-mentioned support staff and homeless people during harsh winters.
- **Textbooks:** As the information about 'Sahyog' spread, requests were received for textbooks for needy children of 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> Standards from Government Higher Secondary School, Clement Town. 'Sahyog' provided 18 full sets of textbooks to this school.
- **Supporting girl orphanage:** Since December 2020 'Sahyog' is associated with an all-girl orphanage 'Apna Ghar'. It is home to 47 girls. 'Sahyog' has supported the orphanage with thermal pairs, blankets, stationery, food items, etc.
- **Supporting Autism Welfare Society:** 'Autism Welfare Society', an organisation for the care of special children, was supported with essential food items and ration.
- **Medical Consultation:** 'Sahyog' provided contact of a medical practitioner, for medical consultation. Further, volunteers were identified for helping staff in arranging important drugs-medicines, which were also difficult to arrange.

The office adopted a broader approach to welfare by not trying to create an island of well-being in an otherwise struggling larger society. Volunteers and their families drew immense satisfaction and peace of mind from their work given the significance and magnitude of the initiative; voluntary nature of mobilising funds and support; and the satisfaction and sense of social responsibility it generated.

## Ration Packet

3 kg Wheat Flour

3 kg Rice

1 kg Chana Dal

500 ml Mustard Oil

Salt  
Turmeric Powder  
Red Chilli Powder

## Testimonials from Dehradun

1. इस मुश्किल दौर में हमारे बच्चों के लिए राशन और फीस की ज़िम्मेदारी उठाकर आप लोगों ने हमारी जो मदद की वो हमारी सोच से परे की चीज़ है। ऊपरवाला आपको हमेशा खुश रखे।  
- Aziz Ahmad, father of Md. Danish, studying in VIIIth Standard.
2. हमें अभी भी यकीन नहीं हो रहा है की ऐसे मदद आज के समय में कोई कर सकता है। मेरे परिवार और मेरे बच्चों की इस मुसीबत में सहारा बनने के लिए हम ताउम्र आप लोगों को याद करेंगे और दुआ देते रहेंगे।  
- Md. Rihan Salmani, father of Sahjad studying in IX<sup>th</sup> standard.
3. मेरे परिवार में 07 सदस्य है लॉकडाउन में कामधन्धा सब बंद हो गया था, खाने-पीने के लिए तकलीफ हो रही थी। आप लोगों के राशन पहुंचाने से हमारी बहुत मदद हुई है।  
- Bindeshwari Das, Slum dweller, Ganga vihar, Kaulagarh, Dehradun
4. मेरे पिता जी को लकवा है, मेरी तथा मेरी माँ दूसरे घरों में बर्तन, झाड़ू-पोंछा का काम करते है। परिवार में कुल 10 सदस्य है। उस वक़्त आप के द्वारा हर हफ्ते राशन पहुंचाने से हमारे घर में चूल्हा जल पाया है।  
- Aarti, Kaulagr, Dehradun
5. सामान्य परिस्थितियों में तो लोगों के द्वारा बहुत सहायता मिल जाती है लेकिन संकट के इस समय में जब हम लोगों को अत्यंत आवश्यकता थी आप लोगों की मदद बहुत उपयोगी एवं सराहनीय है।  
- Founder and administrator, 'Apna Ghar' Orphanage, Dehradun
6. **Grateful for your generous help. Such support is helping us to make it possible for children living with Autism and multiple disabilities to lead happier and fruitful lives.**  
- Secretary, Autism Welfare Society, Dehradun
7. सभी साथियों द्वारा भरकस योगदान दिया गया है जिस से स्थानीय स्तर पर जरूरत मंदो की मदद की गयी है। इस प्रयास को अनवरत जारी रखने के लिए प्रतिबद्ध है।  
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