



विद्युत मंत्रालय
MINISTRY OF
POWER

सत्यमेव जयते

Preventive Vigilance Initiatives Booklet

Sharing Best Practices in Power Sector CPSEs



“सतर्कता: हमारी साझा जिम्मेदारी”
“Vigilance: Our Shared Responsibility”

सतर्कता जागरूकता सप्ताह 2025
Vigilance Awareness Week 2025

ABOUT THE BOOKLET

The Ministry of Power (MoP), Government of India is committed to undertake various initiatives to enhance integrity, promote transparency, and streamline business processes across all organizations under its ambit. A key focus is also on preventive vigilance, which plays a vital role in improving systems and further standardisation.

The importance of preventive Vigilance is enormous particularly in this age of technology driven Government businesses. Preventive Vigilance includes adoption of practices which promote transparency, equity and brings integrity to the fore. Sharing of best practices enables other similar organisations to emulate and therefore considered an important tool towards preventive vigilance.

In alignment with this objective, the Ministry is making efforts towards adoption and replication of successful initiatives already taken by its organisations. To facilitate this, CVOs of all the CPSEs under the Ministry met and shared their best practices which are worth emulating.

These practices are not only significant and easy to adopt but also hold relevance beyond the power sector, offering valuable insights for CPSEs across various domains.

The deliberations emanating from the meetings of the CVOs have been recorded. Further publication of the best practices seems imperative for retention, education and information among all stakeholders with a view to emulate and further improve the system. It is trusted that this publication will help all the organisations to learn and emulate the best practices.







मनोहर लाल
MANOHAR LAL



विद्युत मंत्री एवं
आवासन और शहरी कार्य मंत्री
भारत सरकार
Minister of Power and
Minister of Housing and Urban Affairs
Government of India



MESSAGE

It gives me immense pleasure to note that the Ministry of Power is publishing a booklet showcasing the best practices adopted by CPSEs and other organisations under the Power Sector.

The Government of India is continuously working towards simplifying processes, enhancing accountability, and building systems that are robust, effective, efficient, and citizen-centric.

The initiatives are in line with the vision of Hon'ble Prime Minister for Viksit Bharat to bring greater transparency, integrity and fairness in the system.

I would like to advise all the organisations to implement the best practices which are successfully running in other organisations. I would also like to appreciate the pivotal role played by all CVOs in ensuring that development and integrity go hand in hand. I congratulate and extend my best wishes to all the CVOs of the CPSEs under this Ministry for this publication.

(Manohar Lal)



श्रीपाद नाईक

राज्य मंत्री
नवीन और नवीकरणीय ऊर्जा एवं विद्युत
भारत सरकार



सत्यमेव जयते

SHRIPAD NAIK

Minister of State for
New and Renewable Energy & Power
Government of India



MESSAGE

It gives me immense satisfaction to note the release of this booklet on Preventive Vigilance during *Vigilance Awareness Week 2025*. This initiative to compile and share best practices adopted by various organizations under the Ministry of Power is commendable. It reflects our collective resolve to promote transparency, fairness, and accountability across all levels of governance.

The compilation highlights how our organizations are increasingly adopting technology-driven and process-based reforms, resulting in enhanced efficiency, integrity, and public service delivery. Such forward-looking measures not only strengthen institutional systems but also embody the spirit of "*Corruption-free Governance*" envisioned by the Government.

Preventive vigilance is the foundation of good governance. As we move towards realizing the vision of our Hon'ble Prime Minister of Visit Bharat @ 2047, the principles of integrity, innovation, and inclusiveness must remain at the core of our administrative and organizational functioning.

I extend my sincere appreciation to all Chief Vigilance Officers (CVOs) under Ministry of Power for their proactive efforts in preparing this publication and for their continued commitment to building a clean, efficient, and responsible system of governance.

(Shripad Naik)

New & Renewable Energy : 7th Floor, Atal Akshay Urja Bhawan, Lodhi Road, New Delhi-110003

Tel.: 011-20849074-75, 20849141, E-mail: mos-mnre@gov.in; shripad.naik@sansad.nic.in

Power: Room No. 200, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001, Tel.: 011-23720450-51

Res. (Delhi) : 1, Lodhi Estate, New Delhi-110003, Tel.: 011-24635396, Fax: 011-24656910

Res. (Goa) : "Vijayshree" House No. 111, St. Pedro, Old Goa, Goa-403402, Tel.: 0832-2444510, 2444088

पंकज अग्रवाल, भा.प्र.से
सचिव
Pankaj Agarwal, I.A.S.
secretary



भारत सरकार
विद्युत मंत्रालय
श्रम शक्ति भवन, नई दिल्ली-110001

Government of India
Ministry of Power
Shram Shakti Bhawan, New Delhi - 110001
Tele : 2371027/23711316
Fax: 23721487
E-mail : secy-power@nic.in



MESSAGE

It is a matter of great pleasure that the Ministry of power, Government of India is bringing out a booklet on best practices showcasing various initiatives taken by its organisations to bring transparency, equity and fairness and impartiality.

These initiatives cover efforts towards system improvement, process simplification, leveraging digital tools, and enhancing stakeholder awareness. The initiative of sharing best practices among CPSEs and other organisations is a right step for education, information and emulation.

These initiatives are seen as an effective tool to increase efficiency and also promote accountability which is core to the aspiration of Hon'ble Prime Minister for Viksit Bharat.

I extend my heartfelt congratulations to the CVOs of the CPSEs under MoP for their deliberations and highlighting the best practices for wider circulation.

(Pankaj Agarwal)



संयुक्त सचिव
JOINT SECRETARY



भारत सरकार
GOVERNMENT OF INDIA
विद्युत मंत्रालय
MINISTRY OF POWER
श्रम शक्ति भवन, रफी मार्ग
SHRAM SHAKTI BHAWAN, RAFI MARG

नई दिल्ली . 110001
NEW DELHI - 110001



MESSAGE

The Central Vigilance Commission, as the apex anti-corruption body of the nation, has emphasized the importance of Preventive Vigilance. As we know, preventive vigilance encompasses a wide range of initiatives including standardization of procedures, leveraging technology, and enhancing awareness among citizens and other stakeholders.

I extend my sincere gratitude to the Hon'ble Minister of Power and Secretary (Power) for their visionary leadership in initiating and conceptualizing the idea of sharing best practices among CPSEs in the Power Sector. These organizations undertake diverse operations that often serve as benchmarks in their respective domains and therefore needs to share it with other organisations also. This collaborative endeavour to share best practice will significantly contribute towards strengthening vigilance frameworks and promoting transparency across all business functions.

I deeply appreciate the efforts of all Chief Vigilance Officers (CVOs) of CPSEs under the Power Sector, who have brainstormed and chosen important initiatives. Their thoughtful discussions and deliberations have culminated in the sharing of valuable articles on best practices within their organizations.

I trust that this compilation will serve as a valuable resource for other organizations in bringing systematic effective change.



(D. SAI BABA)

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पावरग्रिड
POWERGRID



PG-AMRIT

ASSET MANAGEMENT THROUGH ARTIFICIAL INTELLIGENCE IN POWER TRANSMISSION LINES

1. A brief on PG-AMRIT

PG-AMRIT (POWERGRID Asset Management through Artificial Intelligence in Transmission) is an in-house application developed by POWERGRID to revolutionize transmission tower maintenance. It has been utilized since 2024 for identifying defects in transmission lines.



PG-AMRIT utilizes Artificial Intelligence (AI)/ Machine Learning (ML) based engines that process transmission line inspection photographs. It is an AI-based image processing platform integrated into the transmission line patrolling ecosystem.

The core function of the portal is to automatically identify the defects in transmission towers using GPS-tagged photographs, thereby eliminating manual questionnaire-based inspections and reducing human bias.

2. Challenges before implementation of PG-AMRIT

There were a few challenges faced by POWERGRID's inspection staff in managing transmission line maintenance before the introduction of PG-AMRIT (Asset Management through Artificial Intelligence in Transmission). These challenges stemmed from the limitations and inefficiencies of the manual, non-digital inspection process.



The key challenges included:

- i. **Manual Segregation of Photos:** Inspection staff had to manually separate photographs and organize them by the respective line and tower names, filing them into different folders.
- ii. **Manual Analysis and Defect Marking:** The process required personnel to manually analyze the photographs and then manually mark the identified defects for each transmission tower.
- iii. **Manual Report Preparation:** The inspection staff was responsible for compiling and preparing the defect reports manually.

The development of PG-AMRIT was intended to overcome these manual process limitations by implementing an AI-based image processing platform, thereby eliminating manual questionnaire-based inspections and reducing human bias. The portal's success in reducing analysis time and minimizing human error implies that the former manual process was time-consuming and prone to errors.

3. Details of PG-AMRIT

I. Description and Core Functionality

PG-AMRIT is capable of identifying approximately 35 types of defects. Examples of the defects the system can detect include:

- Tree in Right-of-way (ROW)
- Tower bolt missing
- Bird guard missing
- Tower member hanging
- Tower parts bent
- Damaged glass discs
- Reversed grading rings
- Bird nests and bee hives
- Missing joint plates

The system identifies the tower number and transmission line name based on the GPS-tagged photographs and then generates defect reports.

II. Implementation and Technology

The system relies on advanced technology and integrates with existing infrastructure.

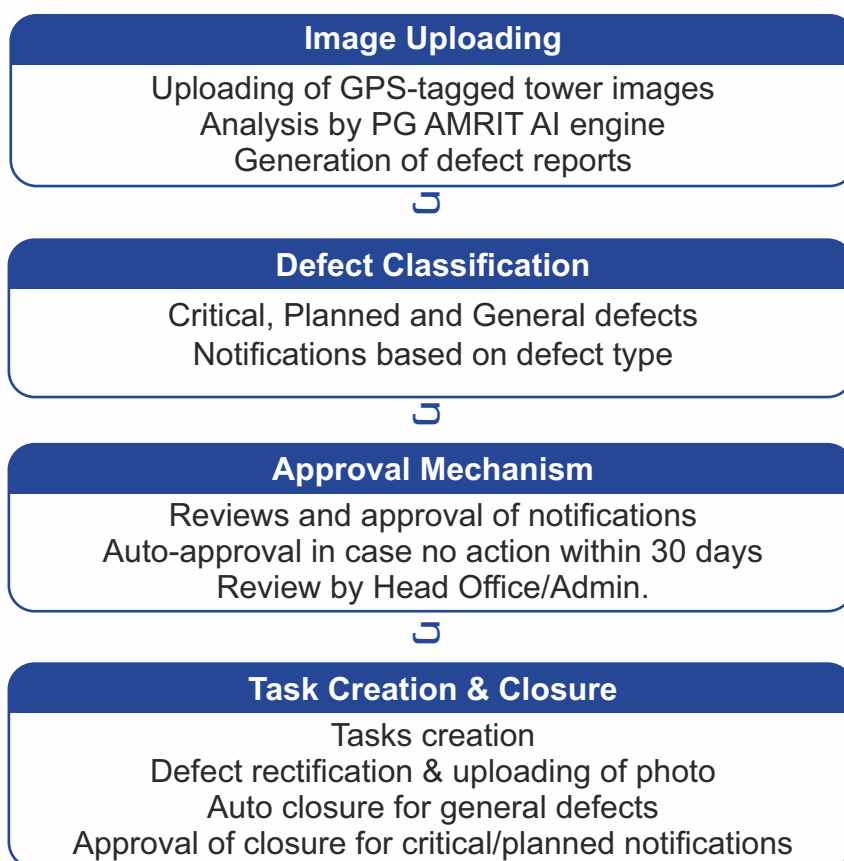
IT System Components:

- **AI Engine:** The PG-AMRIT AI Engine utilizes advanced machine learning and Convolutional Neural Network (CNN) for analyzing GPS-tagged tower images and detecting defects automatically.
- **IT Infrastructure:** To support PG-AMRIT's image processing capabilities across different regions, the system uses five virtual servers, which are fully integrated with the patrolling application to ensure smooth and seamless data exchange.
- **Data Storage:** PG-AMRIT uses SQL tables to store defect data, user login information, and tower characteristics that are sourced from the ERP (Enterprise Resource Planning) database.
- **Access:** PG-AMRIT is accessible through the POWERGRID intranet under the AM Corner > PG DARPAN section.

- **Integration:** The system is integrated with the ERP database, which enables the automatic creation of maintenance notifications for approved defects and updates the ERP database once tasks are closed.

III Workflow (Defect Identification & Notification Flow):

(Defect Identification & Notification Flow) / Process are as under):



4. IMPACTS & BENEFITS:

PG AMRIT has improved the way POWERGRID manages transmission tower maintenance. It has reduced analysis time and human error, enabling faster defect identification and resolution. The use of AI has ensured consistent and unbiased defect assessment, while executive approvals and automated reminders enhance accountability and reduce delays. Its scalable design supports large-scale patrolling across varied terrains and is built to integrate with future systems. The centralized defect database allows real-time tracking and historical analysis, helping in better planning and decision-making.

5. REPLICABILITY

The system is continuously being upgraded based on user feedback. This system can be easily replicated by organizations in similar sector.



Contract Closing Portal adopted in POWERGRID

1. A brief on contract closing portal

The Contract Closing Portal (CCP) is a digital initiative implemented by POWERGRID aimed at ensuring transparent and effective closing of contracts.

2. Challenges before Contract Closing Portal

- Manual Processes and Delays: Previous systems were manual and prone to delays.
- Lack of Transparency: Prior process was opaque, likely requiring vendors to visit departments for follow-up.
- Inconsistent Procedures: Previously, closure procedures, workflows, and checklists were inconsistent across various contracts or departments.
- Poor Visibility: Monitoring progress was previously difficult.

3. Details of Contract Closing Portal

Below are the details of the portal, including process flow, and benefits:

I. Brief Description and Functionality

The Contract Closing Portal serves as a centralized portal designed to offer comprehensive visibility into the key metrics, milestones, and required actions related to contract closure. It utilizes an Online System to handle various Contract Closing activities and facilitates the issuance of departmental Contract Closing Proformas (CCPs).

The closure process is standardized through the use of 14 numerical proformas (CCP01 through CCP14) devised to cover all aspects of a contract.



List of required CCPs (Examples):

CCP01	Final Amendment	CCP08	Material Reconciliation at site
CCP02	Receipt of all Drawings from Contractor Engg.	CCP09	Payment Reconciliation Accounts
CCP03	Receipt of QA Documents QA & I	CCP10	Fulfilment of statutory requirements
CCP04	Receipt of O&M manuals Engg.	CCP11	No Demand Certificate
CCP05	Scope completion from site	CCP12	Warranty completion
CCP06	Settlement of LD Contracts	CCP13	Release of CPG Accounts
CCP07	test Execution at site	CCP14	Vigilance Clearance Certificate, if Vigilance inspection held

II. Implementation and Process Flow

The contract closing process follows a specific automated workflow:

- **Initiation:** The Project Monitoring Department (PMD) identifies the Purchase Order (PO) number in SAP to trigger the contract closing process.
- **Assignment:** The Regional Project Monitoring group allocates the different CCPs to the concerned executives based on their work responsibility.
- **Vendor Interaction:** Vendors can access the system through the ERP system (<https://etender.powergrid.in>). Vendors may log in, upload necessary documents, update punch points, and provide liquidation for punch points. An online workflow is used for approvals related to activities like CCP-01 (Final amendment to contracts) and CCP-05 (Scope Completion).
- **Approval & Rejection:** POWERGRID executives responsible for the CCPs can accept or reject the requests made by the vendor.
- **Monitoring and Notification:** All approvals/rejections are automatically communicated via e-mail triggers to the vendor and POWERGRID stakeholders. Both the vendor and management can track the status of the contract closing in real-time.
- **Vigilance Clearance:** CCPs are issued online by the respective departments. Specifically regarding Vigilance Clearance (CCP-14), if recovery penalties are fetched automatically via the VINS portal due to pending recoveries, these must be settled before CCP-14 release. Release of Retention money and other closing activities should not be withheld for NOC from Vigilance for issues pertaining to the pre-award stage. However, vigilance paras linked to post-award execution/quality issues should be settled before closure. CCP-14 is mandatory when a Vigilance Inspection has been conducted.



4. Benefit of Contract Closing Portal

The portal provides substantial benefits related to monitoring, efficiency, standardization, and stakeholder confidence.

The key benefits of the Contract Closing Portal include:

- i. **Real-Time Tracking of Contract Closure Activities:** The portal monitors the progress of contract closure activities from the commissioning stage through to the final closure of contracts.
- ii. **Enhanced Coordination:** It facilitates effective coordination between various concerned departments, referred to as Responsibility Centres.
- iii. **Ease of Traceability & Accessibility:** The portal offers centralized access to all data and documents related to contract closure, which ensures easy traceability. Documents are compiled and made available in an online repository, and real-time status of contracts is synchronized with a management dashboard.
- iv. **Standardization of Closure Procedures:** The CCP ensures consistent workflows and checklists across all contracts, standardizing the closure procedures. The process uses 14 numerical proformas (CCP01 through CCP14) to cover all aspects of a contract, ensuring standardization.
- v. **Transparency in Contract Closing:** The contract closing process is made transparent, and all proceedings are captured in the system. Vendors are not required to visit departments for follow-up because timelines and transparency are maintained.
- vi. **Improved Supplier Relationship:** By moving the contract closing process online, the CCP increases vendor confidence in the supply chain process, thereby strengthening supplier relationships.
- vii. **Automation and Monitoring:** The system provides a robust platform where concerned POWERGRID executives can accept or reject vendor requests, with status updates communicated automatically via e-mail triggers. Management can track the status of contract closure in real-time.
- viii. **Tracking of Contracts (MIS Reporting):** The portal provides **region-wise distribution of contracts** categorized by total packages, closed, and pending status. It also allows users to view contracts where elements have been commissioned in a particular year by selecting the fiscal year and completion year.

5. Replicability

This digital platform is highly valuable for enhancing contract-closing efficacy and promoting transparency. It can be replicated and adopted by any type of organization dealing with public procurement where contract closure is a critical activity.

PG-NIRMAAN

1. A Brief on PG-NIRMAAN

PG-NIRMAAN is a mobile application developed by POWERGRID to digitalize the process of construction quality assurance and project monitoring. PG-NIRMAAN aims to ensure the required high level of quality during construction activities for high-voltage projects, specifically during Tower Foundation, Erection, and Stringing. The application digitalizes the Field Quality & Assurance (FQA) formats, which are essential for capturing sub-activities according to quality norms. This transformation moves the process away from hard copies and physical movement of documents, making the entire workflow highly transparent, paper-less, real-time trackable, and efficient.

2. Challenges before implementation of PG-NIRMAAN

The sources identify several key challenges related to construction quality assurance that existed before the implementation of PG-NIRMAAN in POWERGRID. These challenges stemmed from the reliance on a manual, paper-based workflow for managing Field Quality & Assurance (FQA) forms and associated construction documents.

The key challenges were:

- i. **Reliance on Physical Forms:** All mandatory FQA formats designed to capture construction quality sub-activities (like Tower Foundation, Erection, and Stringing) had to be completed in hard copy.
- ii. **Manual Approval Process:** The FQA forms required manual approval by the POWERGRID site engineer.
- iii. **Extensive Paperwork and Physical Movement:** The process involved a lot of paperwork and the physical movement of documents between various officers to obtain necessary approvals.
- iv. **Lack of Real-Time Traceability:** The manual, paper-based workflow meant the process was not real-time trackable.

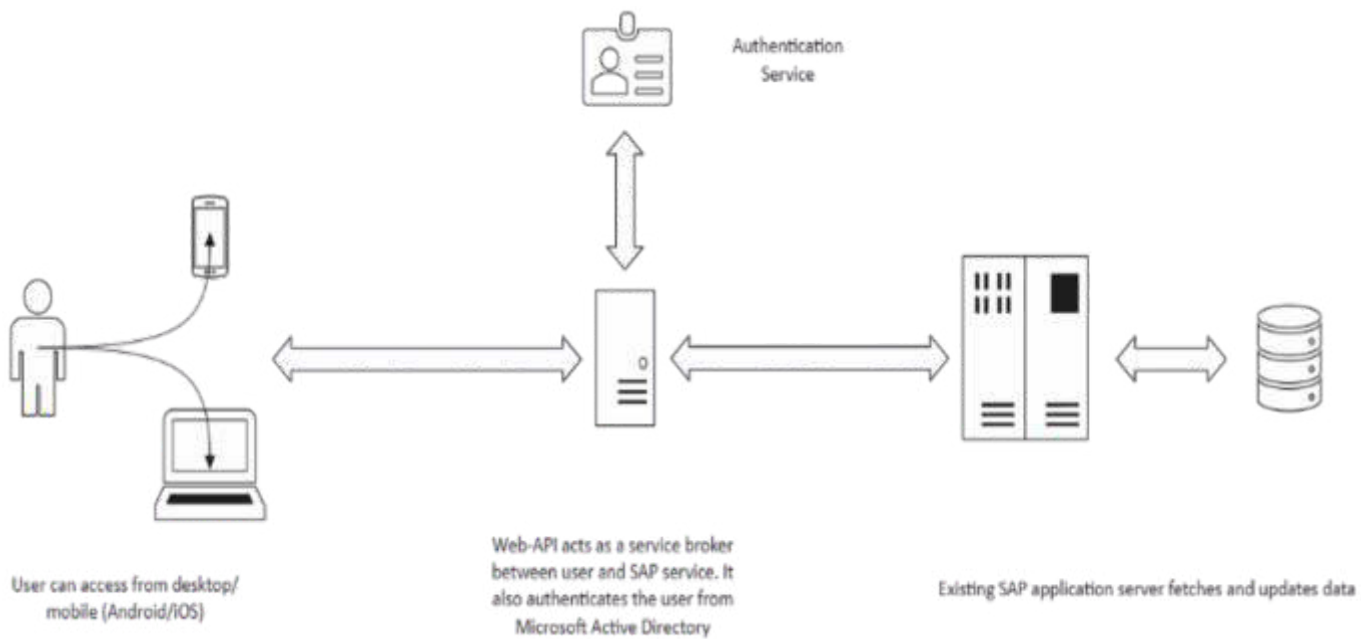
3. Details of PG-NIRMAAN

I. **Objective and Scope of the Initiative**

The primary objective of PG-NIRMAAN is to ensure the required high level of quality during construction for high-voltage projects, specifically covering major activities such as Tower Foundation, Erection, and Stringing. The portal digitalizes the FQA formats required to capture sub-activities per quality norms. This digitalization removes the necessity for hard copy formats and their physical movement to various



officers for approval. The application also incorporates other related site activities, including site progress, Right-of-way (RoW) issues, resource mobilization, and Level 3 (L3) schedule, which involves monthly project planning.



Architecture

II. Workflow and Application Usage

The application is utilized by both vendors and POWERGRID personnel for several critical functions:

- **FQA Submission and Approval:** Vendors use the application for submitting the FQA forms for Tower Foundation, Erection, and Stringing. Vendors can include attachments such as photographs with their submissions. Designated POWERGRID users in-charge of the line can view and approve these forms, or return them to the vendor for necessary corrections.
- **Construction Progress Tracking:** POWERGRID users can update the progress of construction activities (like Foundation, Erection, and Stringing). Updates for Substation construction activities (including Civil works and Erection) are also possible.
- **Issue Tracking:** The application allows users to flag Right-of-way (RoW) issues that might hinder construction activities.
- **Resource Planning:** There is an option for management to plan resources, including human resources like gangs and physical resources (e.g., crane, drone).
- **Data Analytics and Reporting:** The application facilitates the viewing of basic reports, including a detailed dashboard and data analytics, utilizing the Qlik platform.

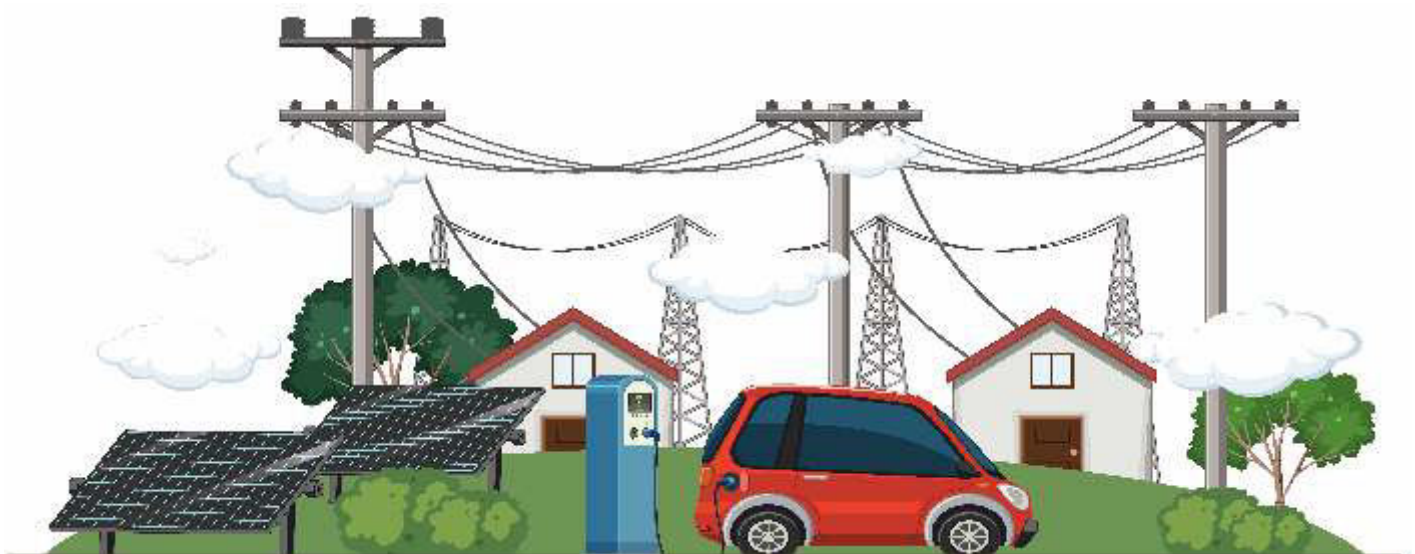
4. Impact and Benefits

PG-NIRMAAN delivers efficiency, transparency, and assurance throughout the construction lifecycle:

- **Real-Time Data Updates:** Data is synchronized and fetched in real-time from the backend SAP system, ensuring all users, including management, have the same view of project status.
- **Paperless Workflow:** It enables a paperless workflow and provides faster approvals for FQA forms.
- **Issue Resolution:** It allows for the improved handling of Right-of-way (RoW) issues during construction activities.
- **Resource Management:** The application aids in resource optimization and planning, ensuring resources are utilized in the most efficient and timely manner.
- **Robustness and Security:** Integration with the robust SAP system ensures high data security and reliability.
- **Knowledge Database:** Data captured, including photographs, can be utilized for training purposes in the future.
- **Live Progress Tracking:** Users can view data for their assigned packages, and management can track live progress using the reports available.

5. Potential for Replicability

Due to the critical nature of Field Quality & Assurance in any project-related organization, the PG-NIRMAAN platform is considered highly valuable and replicable. The application is suitable for adoption by other organizations handling construction projects, especially those involving linear assets such as roads and pipelines.





Digital course on Preventive Vigilance in POWERGRID

1. A brief on Digital course on Preventive Vigilance in POWERGRID



The Digital course on Preventive Vigilance in POWERGRID is an in-house developed e-module deployed within POWERGRID's dedicated intranet portal, PRAGYAN (The E-learning Portal). This initiative was undertaken in alignment with the Central Vigilance Commission (CVC)'s emphasis on preventive vigilance as a key strategy to curb corruption and enhance transparency.

The digital course was introduced to modernize training techniques and foster a culture of vigilance and accountability throughout the organization. Before its implementation, training on Preventive Vigilance was conducted through workshops, seminars, and other forums. However, due to the limited number of such sessions, it was challenging to provide comprehensive and foundational knowledge to POWERGRID's workforce of approximately 9,500 employees, ensuring delivery across all employees in a time-bound manner.



2. Challenges before implementation of Digital course on Preventive Vigilance in POWERGRID

The main challenges that existed before the implementation of the Digital course on Preventive Vigilance in POWERGRID related to the difficulties in delivering comprehensive and consistent training across the large employee base using traditional methods.

Specifically, the challenges included:

- **Reliance on Limited Traditional Training:** Training for employees across various levels was conducted through workshops, seminars, and other forums.
- **Difficulty in Comprehensive Coverage:** Due to the limited number of such sessions, it was challenging to provide comprehensive coverage and foundational knowledge regarding vigilance to all employees.

- **Significant Logistical Challenge:** POWERGRID, with a workforce of approximately 9,500 employees, faced a significant logistical hurdle in ensuring comprehensive coverage of vigilance subjects to every employee in a time-bound manner.
- **Inconsistent Knowledge Delivery:** Delivering consistent and structured awareness on vigilance subjects to every employee proved to be an enormous task.

3. Impact and Replicability

The course has achieved widespread positive impact:

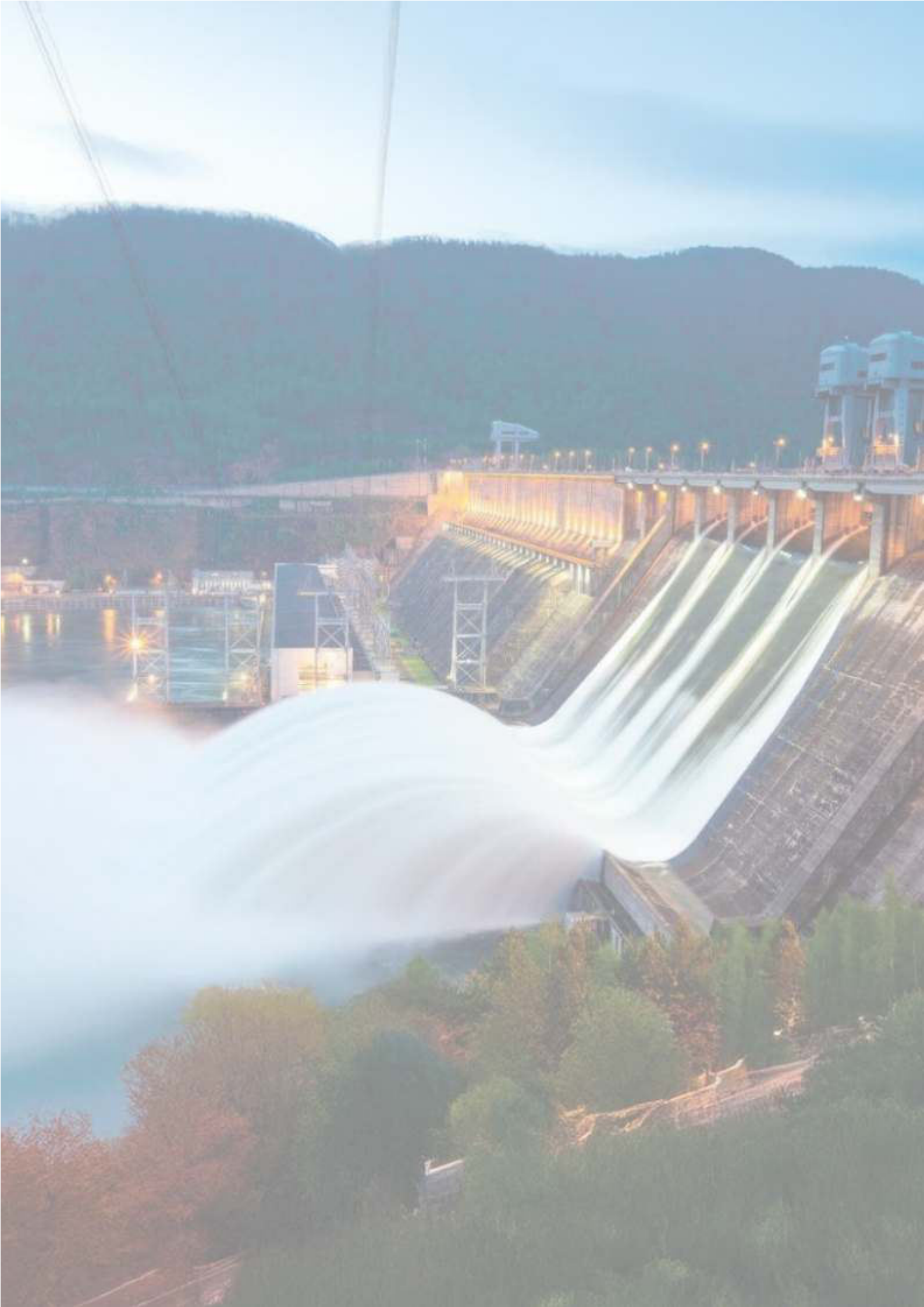
- **Mandatory Training:** Top Management has mandated that all employees complete the course, demonstrating organizational commitment to anti-corruption measures.
- **Scale of Awareness:** Awareness has been spread on a ethically conscious workforce by large scale, with approximately all employees completing the module within a span of about one month.
- **Ethical Culture:** The initiative fosters an leveraging digital tools for transparency and accountability.
- **Replicability:** The e-module was developed in-house and features a user-friendly interface, making this system easily replicated by organizations of any sector.

4. Course Structure and Content

The course provides foundational knowledge about the Vigilance function. It offers essential information on:

The course is organized into five chapters:

1. Anti-Corruption Organizations & Vigilance Setup in POWERGRID
2. Complaint Management, PIDPI, POWERGRID Whistle blower and Fraud Prevention Policy
3. Overview and important tools of Preventive Vigilance
4. Departmental & Criminal Proceedings
5. Miscellaneous (Conflict of interest, Integrity Pact, IEM, Related Party Transactions etc.)





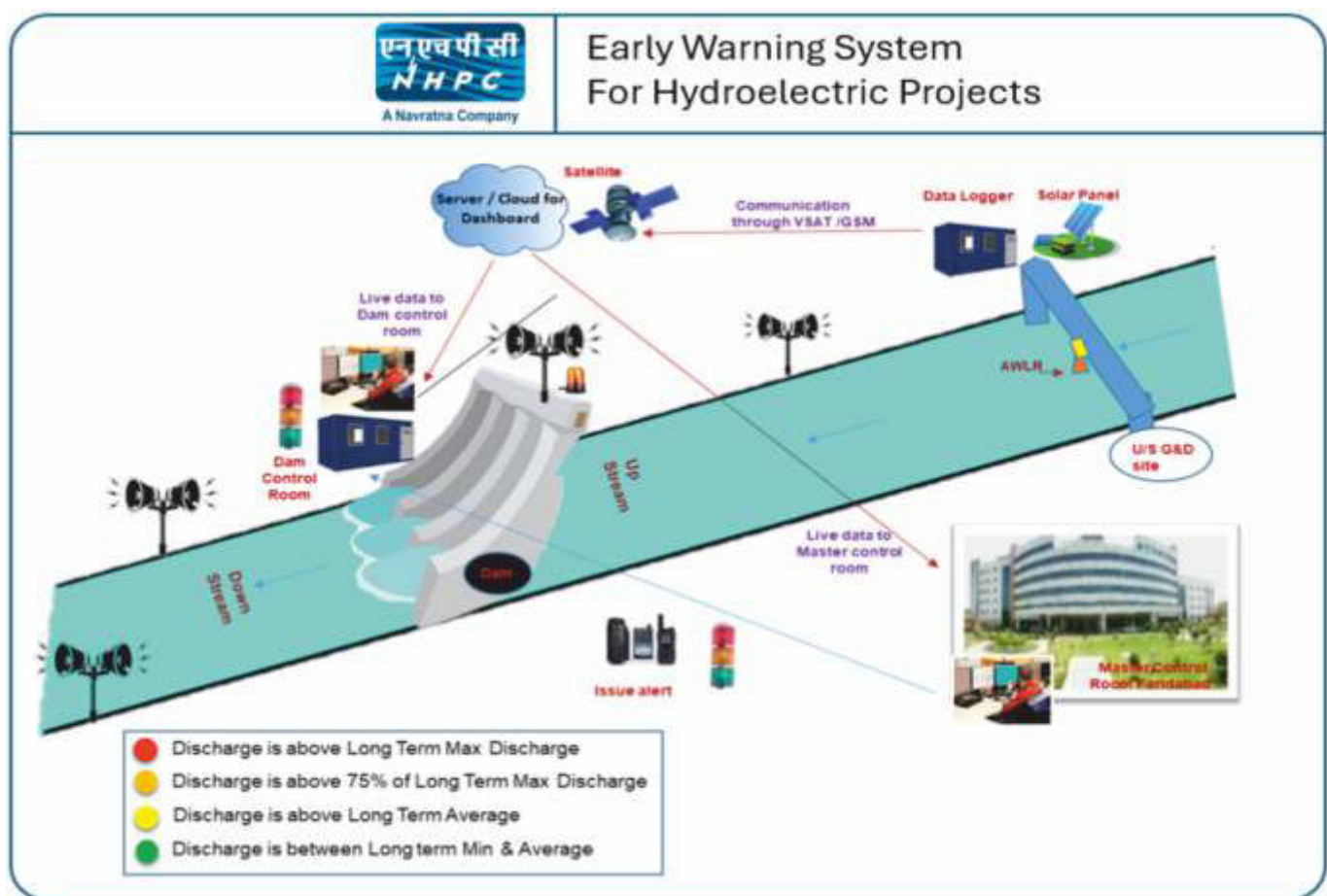




NHPC Limited

“e-Aabhas”-EARLY WARNING SYSTEM FOR HYDROELECTRIC PROJECTS BY NHPC LIMITED

The e-Aabhas Early Warning System (EWS) for Hydroelectric Projects is a major initiative developed and conceptualized by NHPC Limited. It is the first of its kind in India.



The Concept

Brief Description of the Initiative

e-Aabhas is a sophisticated software platform and state-of-the-art Master Control Room (MCR) located at NHPC Faridabad. The system is integrated into the operation of Hydro-Power plants across the country to forecast flood discharge/flow at respective Dams/Barrages with expected lead times, generating immediate alerts for concerned locations.

The system facilitates real-time hydrological monitoring, predictive discharge forecasting of inflow, and automated alert generation, significantly enhancing disaster preparedness, response capability, and operational safety.



2. Challenge before implementation of “e-Aabhas”- Early warning system for Hydroelectric Projects by NHPC Limited

The core challenges, framed as the "Problem Statement/Challenges," before the implementation of e-Aabhas were:

- I. Vulnerability to Natural Disasters: Hydroelectric projects, particularly those located in hilly regions, are inherently vulnerable to natural disasters. These disasters include:
 - o Unforeseen Rainfall
 - o Cloudbursts
 - o Flash floods
 - o Glacial Lake Outburst Floods (GLOF)
 - o Avalanches
 - o Landslide Lake Outburst Floods (LLOF)
- II. Significant Project Risks: These events posed significant risks to both project infrastructure and downstream communities.
- III. Real-World Consequences: The challenges were highlighted by notable recent incidents that resulted in severe flash floods and substantial loss of life and property. Specific incidents mentioned include:
 - o The Uttarakhand disaster of 2013.
 - o The Chamoli district disaster in February 2021.
 - o The GLOF event in the Teesta Basin in October 2023.
- IV. Public Grievances: The consequences of these severe floods led to further results in public grievances, including complaints.

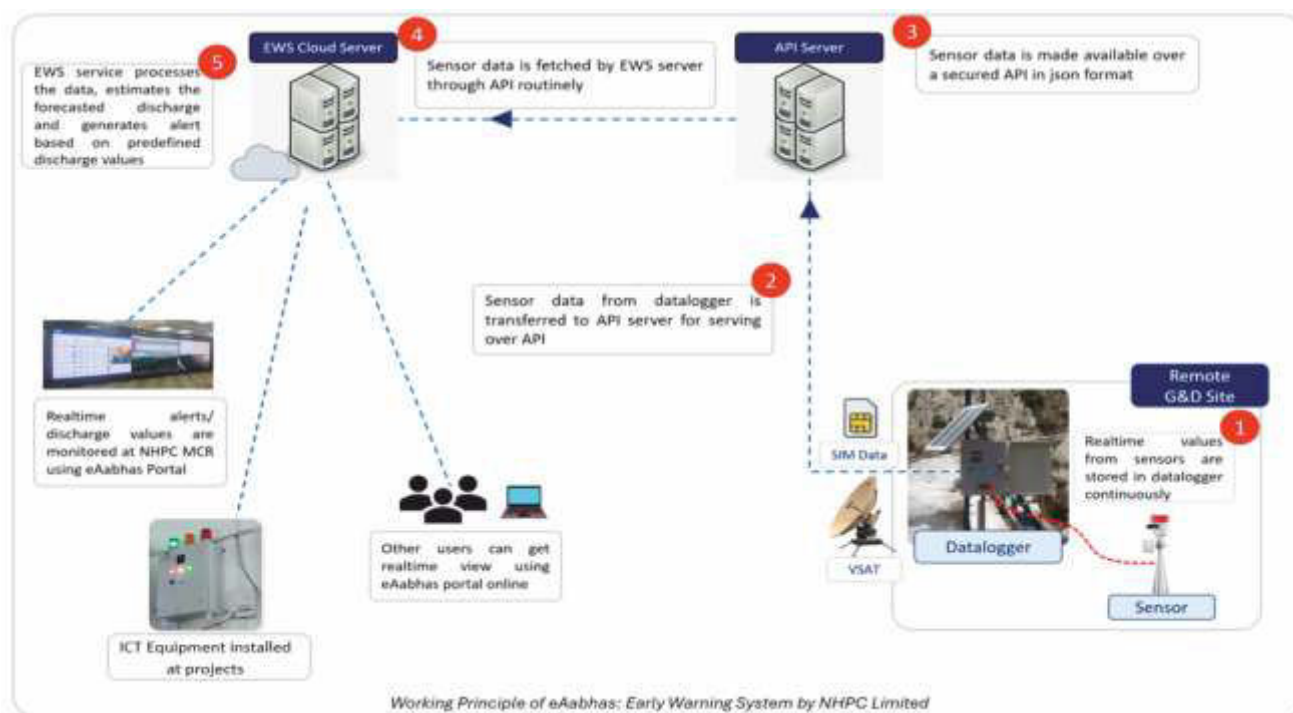


Aerial view of Tapovan barrage two days after a glacier broke off in Joshimath causing a massive flood in the Dhauli Ganga river.

3. Details of “e-Aabhas”- Early warning system for Hydroelectric Projects by NHPC Limited

I. Working Principle of e-Aabhas EWS

The system relies on a multi-step process for providing timely warnings:



- **Strategic Establishment of G&D Sites:** Gauge and Discharge (G&D) sites are strategically established approximately 10–15 km upstream of each dam or barrage. This placement is chosen to ensure an optimal lead time of 1–2 hours, allowing project authorities sufficient time to respond before high flows reach the dam.
- **Installation of Hydrological Sensors:** Automated sensors are installed at each G&D site to measure real-time water level and flow velocity. These measurements are continuously collected to compute discharge values, which form the basis for flood forecasting. A manual data entry option is also available to maintain data continuity if telemetry failure occurs.



Automatic Water Level
Recorder Sensor



Data Transmission Network

- **Data Transmission and Forecasting:** The collected hydrological data is transmitted in real time via mobile networks or VSAT (satellite communication) to the secured NHPC centralized platform,



e-Aabhas. The software processes this data using regression-curves to calculate the forecasted discharge at the dam based on upstream measurements.

- **Real-Time Analysis and Threshold Monitoring:** The software continuously analyzes the forecasted discharge values against pre-defined threshold limits (including long-term Minimum, Average, and Maximum Discharge levels). These thresholds are based on site-specific hydrological and operational parameters.
- **Automated Alert Generation:** If threshold breaches are detected, alerts are generated in real time on the e-Aabhas portal. These alerts are continuously monitored 24x7 at NHPC's Master Control Room (MCR).

II. Alert Dissemination and On-Site Response

The system ensures alerts are immediately distributed to concerned project authorities through multiple channels:

- **Multi-Channel Dissemination:** Alerts are sent via SMS, WhatsApp messages, and Automated voice calls.
- **On-Site Visual and Audio Alerts:** Each hydropower project is equipped with specialized ICT hardware, including Strobe lights (visual alert) and Hooters (audio alert). When an alert is generated, this ICT equipment is automatically triggered to visibly and audibly notify on-site personnel.
- **Immediate Action:** On-site personnel are thus enabled to take immediate actions such as evacuation of the workforce, stopping construction activities, safeguarding equipment, and regulating dam operations.

III. Integration with National Agencies

To ensure accuracy and effectiveness in decision-making, e-Aabhas integrates data from several esteemed National agencies:

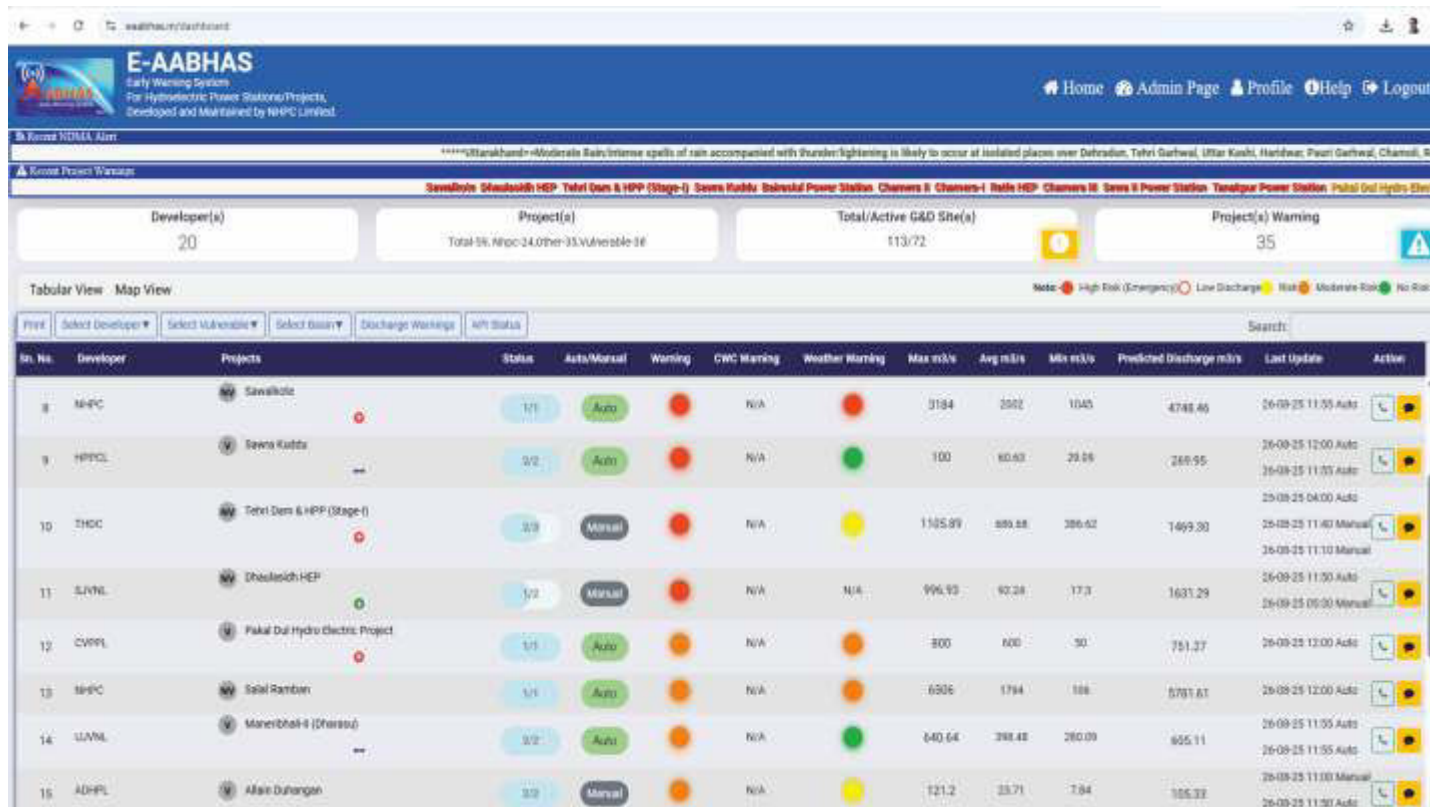
- **Central Water Commission (CWC):** e-Aabhas uses API integration to receive 7-day advisory flood forecasts for reservoir levels and inflows.
- **India Meteorological Department (IMD):** Real-time weather updates (refreshed every 3 hours) and 7-day weather forecasts are integrated from IMD to help with informed operational planning.
- **National Disaster Management Authority (NDMA):** e-Aabhas incorporates real-time alerts issued by NDMA directly into its dashboard, enabling prompt awareness of disaster-related events.
- **Additional Critical Data Sources:** The system also integrates inputs such as District-wise Weather Warnings, National Flash Flood Guidance Bulletins, Extended Range Rainfall Forecasts, MOSDAC Heavy Rain Forecasts, and Earthquake Data recorded by accelerographs at NHPC locations.



Integration with IMD Nowcast and 7 Days Weather Forecast

4. Benefit of "e-Aabhas"- Early warning system for Hydroelectric Projects by NHPC Limited

The e-Aabhas Early Warning System (EWS) for Hydroelectric Projects by NHPC Limited has delivered substantial benefits across economic, life-saving, and operational domains since its implementation.



In. No.	Developer	Projects	Status	Auto/Manual	Warning	CWC Warning	Weather Warning	Max m/s	Avg m/s	Min m/s	Predicted Discharge m/s	Last Update	Action
8	NHPC	Sarvaldi	1/1	Auto	High Risk (Emergency)	N/A	High Risk (Emergency)	3184	2802	1045	4745.46	26-09-25 11:55 Auto	
9	NHPC	Sewa Kutba	2/2	Auto	High Risk (Emergency)	N/A	Low Discharge	100	60.63	29.56	268.55	26-09-25 12:00 Auto 26-09-25 11:55 Auto 25-09-25 04:00 Auto	
10	THDC	Tehri Dam & HPP (Stage-I)	3/3	Manual	High Risk (Emergency)	N/A	Low Discharge	1105.89	889.88	386.62	1469.30	26-09-25 11:40 Manual 26-09-25 11:10 Manual	
11	SIYVNL	Dhuleadih HEP	1/2	Manual	High Risk (Emergency)	N/A	N/A	996.93	67.26	17.3	1631.29	26-09-25 11:50 Auto 26-09-25 06:00 Manual	
12	CVPP	Pakal Dul Hydro Electric Project	1/1	Auto	High Risk (Emergency)	N/A	High Risk (Emergency)	800	600	30	751.37	26-09-25 12:00 Auto	
13	NHPC	Salal Ramban	1/1	Auto	High Risk (Emergency)	N/A	High Risk (Emergency)	6306	1784	188	5787.67	26-09-25 12:00 Auto	
14	SIYVNL	Maneri-Bhalil-H (Dharsu)	2/2	Auto	High Risk (Emergency)	N/A	Low Discharge	840.64	388.48	260.09	605.11	26-09-25 11:55 Auto 26-09-25 11:55 Auto	
15	ADHPL	Alair Duhangan	3/3	Manual	High Risk (Emergency)	N/A	Low Discharge	121.2	33.71	7.84	155.33	26-09-25 11:00 Manual 26-09-25 11:50 Auto	

e-Aabhas Dashboard

The key impacts and benefits of the system include:

I. Life-Saving and Disaster Prevention

- **Economic and Life-Saving Interventions:** The Early Warning System has delivered tangible economic benefits and life-saving interventions across India's hydropower sector.
- **Preventing Potential Disasters:** The system has successfully prevented numerous potential disasters.
- **Safeguarding Lives:** It has safeguarded hundreds of lives through timely alerts and coordinated responses.
- **Workforce Protection:** On-site personnel can take immediate actions based on the automated alerts, such as the evacuation of the workforce and stopping construction activities.

II. Operational and Economic Benefits

- **Protection of Assets:** e-Aabhas has protected costly machinery and infrastructure.
- **Efficient Project Operations:** The Early Warning System enables the timely closing of intake gates during floods, which helps ensure safe and effective sediment flushing, thereby helping to restore reservoir capacity and enhancing power generation.



- **Reduced Manpower/Resource Losses:** Projects, such as the NHPC 2000 MW Subansiri HEP and the 120 MW Rangit IV HEP, were able to save Manpower/life resources due to timely warning from the Master Control Room (MCR).
- **Reduction in Public Grievances:** The system has helped reduce public grievances, including complaints against officials, related to disasters.
- **Improved Decision-Making:** The integration of real-time data from national agencies like the India Meteorological Department (IMD) and Central Water Commission (CWC) aids in informed operational planning and decision-making.

III. Recognition and Scalability

- **Notable Recognition:** NHPC has been honored with the PSE Excellence Award 2025 in the Internet of Things (IoT) category at the prestigious PSE Summit 2025 for this pioneering system.
- **Widespread Application:** The system benefits extend beyond NHPC, as 59 hydroelectric projects (including 24 operated by NHPC and 35 managed by other utilities) have been successfully integrated into the platform, and are availing the benefits.
- **Replicability Potential:** The Early Warning System can be replicated in other sectors such as Structural Health Monitoring, Energy Grids, Chemical Plants, Mining Industries, Manufacturing, and Healthcare under the required modifications and use of appropriate sensors.

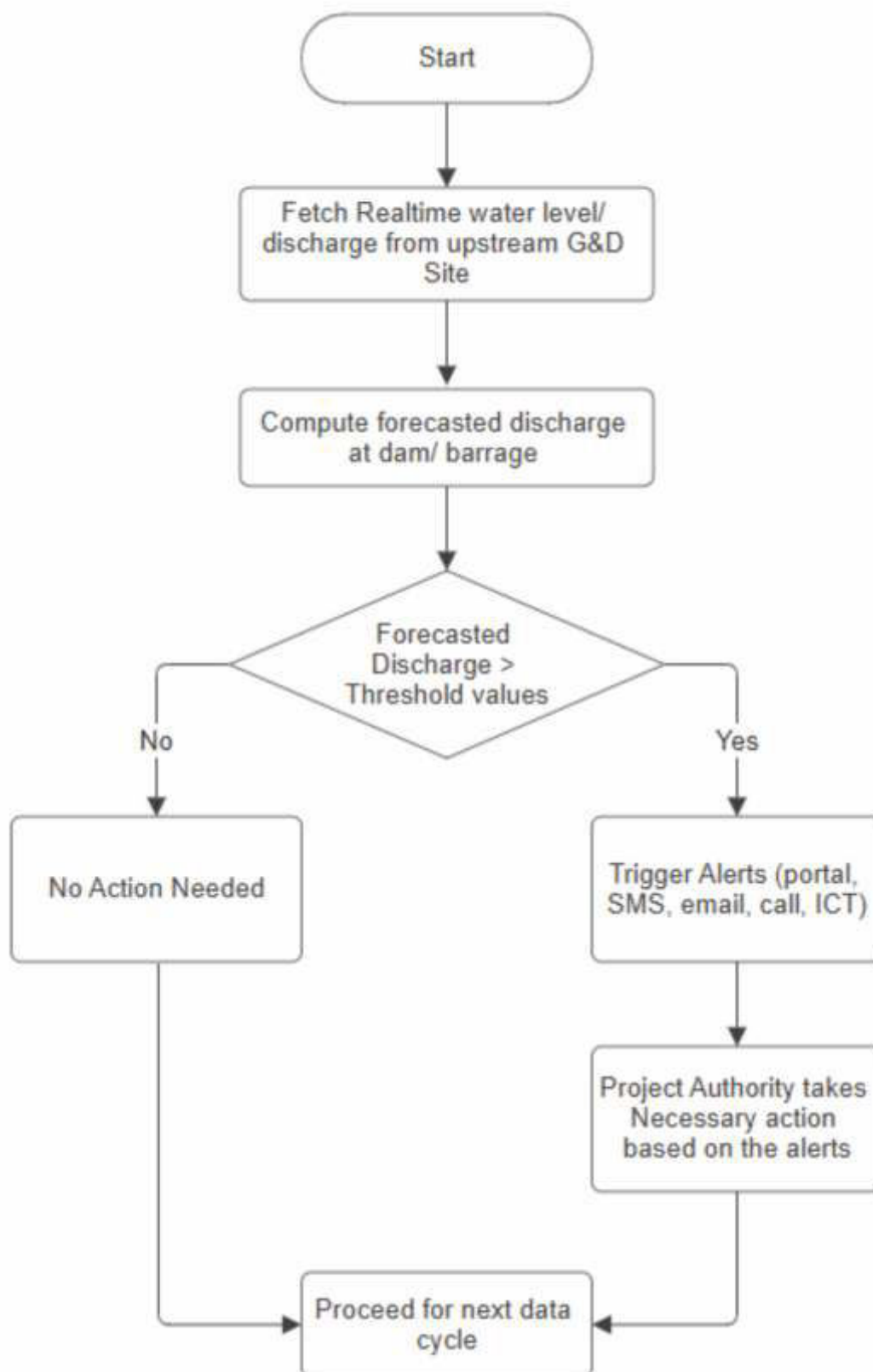
5. Way forward of "e-Aabhas"- Early warning system for Hydroelectric Projects by NHPC Limited

The "Way Forward" for the e-Aabhas Early Warning System (EWS) developed by NHPC Limited is focused on Technology Enhancements for Comprehensive Disaster Management and expanded functional scope.

The planned technology enhancements include:

- Integration of AI/ML and Data Science:** The future direction involves the integration of AI/ML and Data Science to improve the accuracy of forecasts. This will allow the system to detect outliers and anomalies and identify evolving patterns in hydrometeorological data, thereby enabling early predictive analytics and supporting data-driven decision-making in real-time.
- Deployment of Additional Monitoring Stations:** There are plans for the deployment of additional upstream monitoring stations to achieve broader catchment coverage.
- Integration with CAP Platform:** The initiative includes integration with the Common Alerting Protocol (CAP) Platform of C-DOT and NDMA, which will enable the timely dissemination of alerts to local communities during adverse natural calamities.
- Improved Communication Systems:** Plans include the implementation of satellite-based communication systems for remote areas where mobile/VSAT connectivity is unreliable.
- Seamless Connectivity:** NHPC aims for seamless connectivity with NDMA, IMD, and state disaster management systems for coordinated response efforts.

Beyond these specific enhancements, the Early Warning System has been recognized for its potential for replicability in other sectors, such as Structural Health Monitoring, Energy Grids, Chemical Plants, Mining Industries, Manufacturing, and Healthcare, under required modifications and use of appropriate sensors.



Flow Chart of The System



Preventive Vigilance Initiative by NHPC Ltd : Online Vendor Payment Portal

The Online Vendor Payment Portal is a Preventive Vigilance Initiative developed by NHPC Limited. This initiative aims to enhance oversight in vendor payments by ensuring every transaction is transparent, traceable, and secure. The portal also helps empower vendors and contractors by providing them peace of mind regarding timely payment.

Through the portal, the supplier or contractor is able to create requests for payment against their invoice, and subsequently track the status of the same online. This centralization of information, coupled with real-time monitoring, robust audit trails, and automated compliance checks, helps safeguard NHPC's financial ecosystem against fraud and enhance trust with vendors.

2. Challenges before implementation of Preventive Vigilance Initiative by NHPC Ltd: Online Vendor Payment Portal

The implementation of NHPC Ltd.'s Online Vendor Payment Portal was necessitated by several challenges inherent in their previous manual process of managing vendor payments as detailed below:

- I. **Time-Consuming Manual Processes:** NHPC was facing several challenges in vendor payments due to reliance on manual processes, which were time-consuming and prone to errors. These manual processes resulted in delayed payments and often led to strained vendor relationships.
- II. **Increased Risk and Difficult Tracking:** Reliance on paper-based invoicing and check payments increased the risk of fraud and made payment tracking difficult.
- III. **Poor Financial Oversight and Inefficiencies:** The lack of automation resulted in higher administrative costs and inefficiencies in handling large volumes of transactions. This frequently led to compliance issues and missed opportunities for managing good vendor relationships, resulting in poor financial oversight.

3. Details of Online Vendor Payment Portal

I. Brief Description of the Initiative

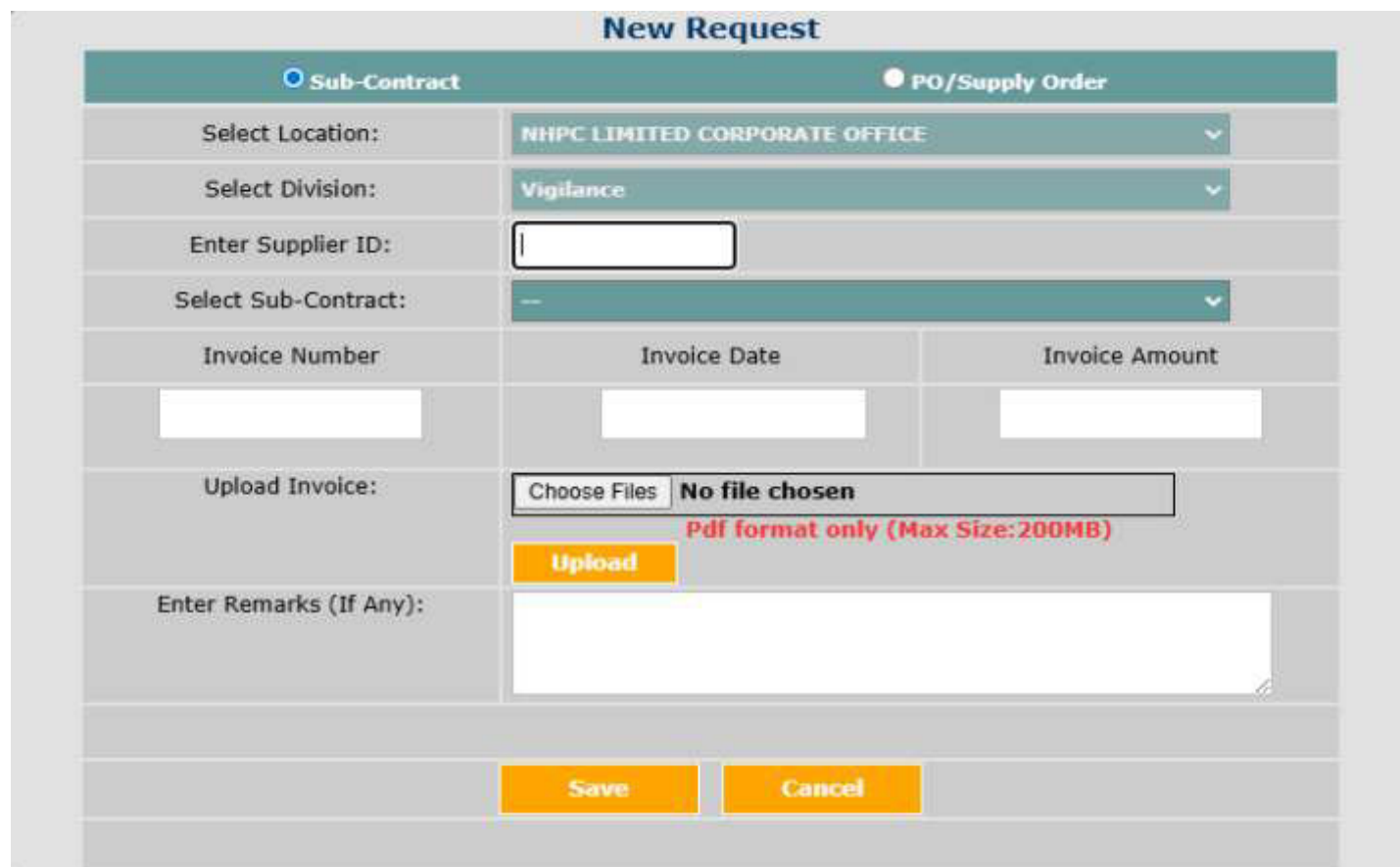
The portal facilitates vendors and contractors in monitoring and tracking the bills/invoices they submit to NHPC. It allows the supplier or contractor to create requests for payment against their invoice and track the status of the request online. The entire process ensures that every transaction is transparent, traceable, and secure through real-time monitoring, robust audit trails, and automated compliance checks. This helps safeguard the NHPC financial ecosystem against fraud and enhances trust with vendors.

II. Implementation and Key Components

The system is available on NHPC's website at the link of 'Vendor Portal'. The key components and functionality of the portal include:

A. User Interface (UI) and User Experience (UX) Design:

- **Dashboard:** A central hub provides users access to essential functions, including payment history, pending invoices, and account settings.
- **Payment Processing:** A dedicated section is available for initiating, scheduling, and tracking payments.



New Request

☒ Sub-Contract ☐ PO/Supply Order

Select Location: NHPC LIMITED CORPORATE OFFICE

Select Division: Vigilance

Enter Supplier ID:

Select Sub-Contract: --

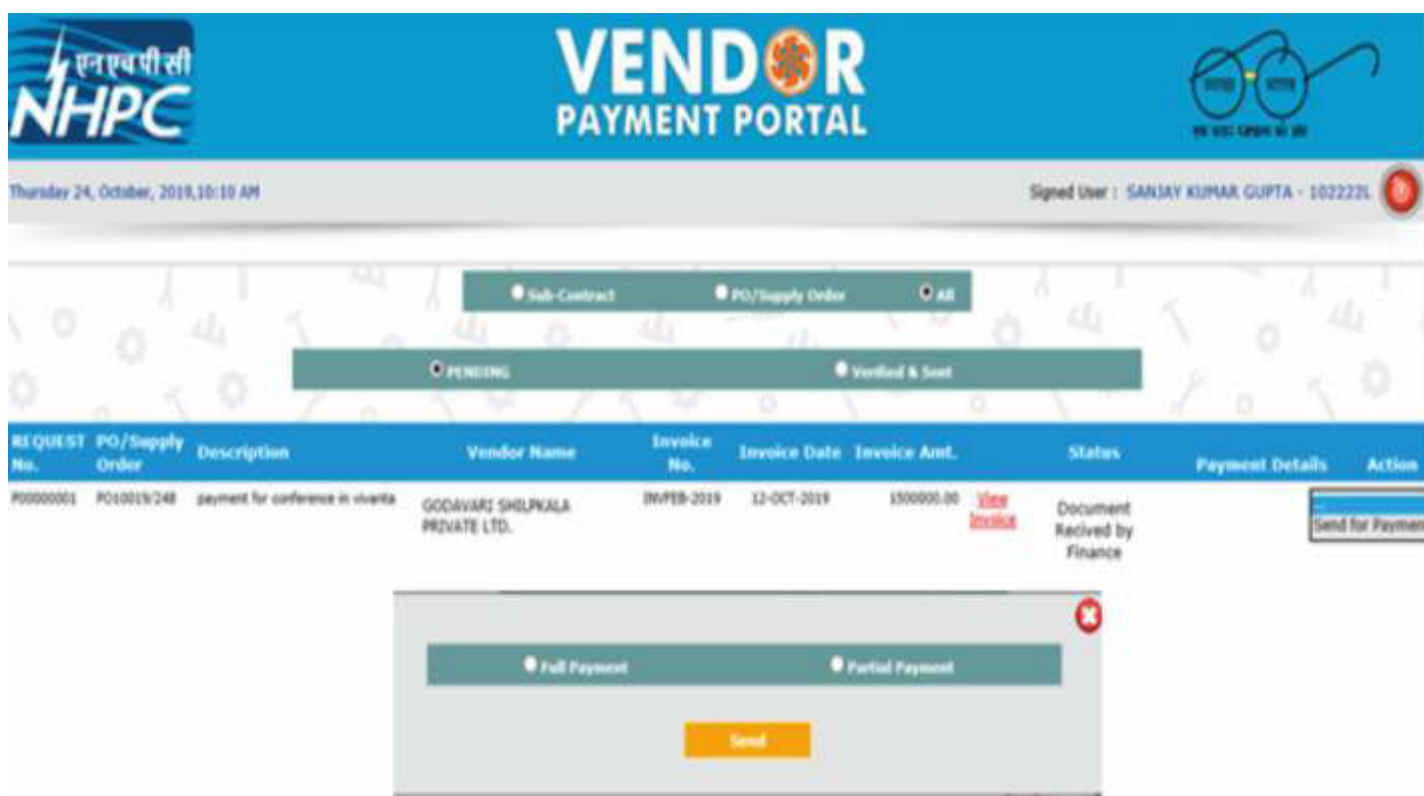
Invoice Number	Invoice Date	Invoice Amount

Upload Invoice: No file chosen
Pdf format only (Max Size:200MB)

Enter Remarks (If Any):

B. Payment Request Creation and Processing:

- Vendors can submit invoices and create a payment request through the portal, attaching necessary documents, such as Sub-Contract or Purchase Order (PO) details.
- The supplier invoice details are generated through the relevant Sub Contract or Purchase Order module of the ERP by the User/Division for payment by the Finance Division.
- All necessary documents are attached in the Supplier Invoice by User Division.
- The Finance Division approves the Supplier Invoice and generates the Payment Voucher.
- The payment file is then generated and uploaded on Bank Site for transfer of Payment Amount from NHPC Account to Supplier/Contractor Account.
- This automation reduces delays and errors, ensuring that vendors are paid promptly.



A Screenshot of Vendor Payment Portal

C. Integration with NHPC ERP System:

- The portal is integrated with NHPC's Enterprise Resource Planning (ERP) system, specifically the IFS ERP System.
- **Data Synchronization:** This integration ensures seamless data flow between the IFS ERP system and the Vendor Payment Portal, reducing manual data entry as key financial data (invoices, purchase orders, vendor details) are automatically synchronized.
- **Automated Payment Processing:** Once an invoice is approved in the IFS ERP system, it is automatically forwarded for Vendor Payment Portal processing.

D. Tracking and Security Features:

- **Real-Time Financial Tracking:** The system allows for real-time tracking of financial transactions. Both businesses and vendors can track the status of payments from initiation to completion in real-time.
- **Compliance and Audit Trails:** All transactions processed through the portal are logged and accessible via the IFS ERP System. This integration provides detailed audit trails for compliance and audit efforts.

- **User Permissions:** Role-based access controls ensure that only authorized personnel can execute payments or access financial data.
- **Notifications:** The portal includes a facility for automatic email or SMS notifications for payment approvals, rejections, or any issues generated through the system.
- **Security Features:** Every transaction is logged with time stamps and user information, making it easier to conduct audits.

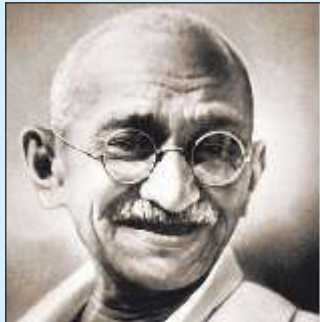
4. Impact and Benefits

The portal, which has processed over 45,000 Vendor Payment Requests since October 2019, has delivered key benefits:

- **Increased Efficiency and Time Savings:** Automating payment processes and reducing manual data entry significantly cuts down on processing time and administrative effort, leading to faster payment cycles.
- **Enhanced Accuracy:** Eliminating manual processes minimizes the risk of errors in data entry and payment processing, ensuring that vendors are paid the correct amounts.
- **Strengthened Vendor Relationships:** Timely and accurate payments foster trust and reliability, ensuring vendors are consistently paid on time, and thus enhancing long-term partnerships. The portal provides vendors with real-time access to payment status, reducing the need for follow-up communications and associated costs (paper checks, postage, manual processing).
- **Enhanced Transparency and Accountability:** The portal provides a centralized platform for managing payments, ensuring transparency, and maintaining compliance with regulatory standards. The real-time tracking of financial transactions contributes to a comprehensive overview of the company's financial health.
- **Compliance and Audit:** Transactions processed through the portal are logged, accessible via the IFS ERP system, and integration provides detailed audit trails, helping meet compliance requirements.

5. Way forward of Preventive Vigilance Initiative by NHPC Ltd: Online Vendor Payment Portal

The "Way Forward" for the Online Vendor Payment Portal by NHPC Limited is focused on upgrading the Enterprise Resource Planning (ERP) infrastructure to ensure a more robust and secure financial system.



“ A ‘No’ uttered from the deepest conviction is better than a ‘Yes’ merely uttered to please, or worse, to avoid trouble. ”

Mahatma Gandhi





OF POWERING GROWTH







NTPC Limited

Integrated Complaint Management System

1. A brief on Integrated Complaint Management System

The Integrated Complaint Management System (ICMS) at NTPC is a comprehensive, digitalized framework developed to manage the vigilance complaint handling process, ensuring it is transparent, efficient, and accountable. It was developed in line with Central Vigilance Commission (CVC) guidelines and NTPC's internal policies.

2. Challenges before implementation of Integrated Complaint Management System

The Integrated Complaint Management System (ICMS) was developed by NTPC to overcome several significant challenges inherent in the traditional, manual methods of handling vigilance complaints.

The challenges before the implementation of the ICMS included:

- **Non-Standardized Complaint Handling:** Complaints had no standardized process for handling, which led to duplication and overlapping efforts across NTPC and often resulted in delays.
- **Manual Movement and Delays:** Vigilance work relied heavily on physical movement of files between the Corporate Headquarters and widely dispersed project locations. This movement significantly slowed down the complaint's disposal process.
- **Compliance Issues:** The delays resulting from manual file movement sometimes meant that NTPC was not able to resolve complaints within the prescribed timelines set by the CVC.
- **Lack of Integration and Duplication:** The manual, physical file-based workflows resulted in duplication of work and a lack of integration across different parts of the organization.
- **Limited Complaint Submission Channels:** Previously, complaints were mainly submitted through various informal and unstructured channels, such as by post, emails, etc., making systematic tracking difficult.
- **Difficulty in Tracking:** Complainants had no standardized process to track the status of their grievances.

3. Details of Integrated Complaint Management System

I. Structure of the System

The ICMS is an end-to-end digital solution that integrates three core modules within NTPC's Enterprise E-Office platform, named PRADIP (Pro-Active and Digital initiatives to become Paperless). The three modules are:

1. **Complaint Monitoring System (CMS):** This system is hosted on the official NTPC website (Vigilance Helpline).



2. **Complaint Handling Module (CHM):** This module is the core operational system that digitizes and automates the complaint management lifecycle.
3. **Detailed Investigation Module (DIM):** This module handles complex vigilance cases requiring in-depth examination and integrates with the CHM and the SAP system.

II. Complaint Monitoring System (CMS) and Tracking

The CMS is designed to bridge the gap between complainants and the vigilance function:

- **Submission:** The CMS allows any individual to submit vigilance-related complaints in a structured and secure manner.
- **Tracking:** Upon filing, a unique reference number is generated. The complainant can use this number to track the status of their submission in real-time on the NTPC website via a single window. The complaint is also received in the e-mail of the Chief Vigilance Officer (CVO).
- **Status Updates:** The system enables the complainant to monitor the progress and updates via complainant dashboard in the Vigilance Helpline portal.

III. Complaint Handling Module (CHM) Workflow

The CHM is the core operational system of vigilance management at NTPC:

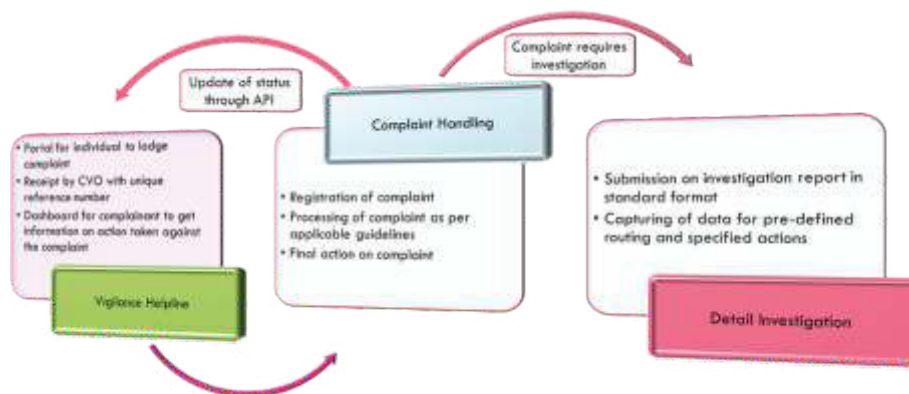
- **Registration and Perusal:** Once the complaint is received, it is formally registered in the CHM and assigned a second internal reference number linked to the PRADIP module. The CVO office conducts the Initial Perusal, , and allocates it for further processing.
- **Scrutiny by RVE:** The complaint is then handled by the Regional Vigilance Executive (RVE), who scrutinizes it to checks for a prima-facie vigilance angle. The RVE recommends closure, file-in, or referral to the appropriate authority, or to send it to Site Vigilance Executive for verification.
- **Verification by SVE:** If complaint contains prima-facie vigilance angle, the file is sent to the respective Site Vigilance Executive (SVE) for verification and fact collection. The SVE verifies mandatory indications by sending a physical verification letter by speed post and records the tracking number online.
- **Action Recommendation:** Following factual verification, the RVE reviews all inputs and proposes the course of action. The file then proceeds to the Head of Vigilance Department (HVD)/Head of Department (HOD) and finally to the CVO for approval.

IV. Detailed Investigation Module (DIM)

The DIM is utilized for complex cases requiring in-depth examination:

- **Initiation:** If irregularities are noticed during the preliminary assessment, approval is sought to forward the case to the DIM. The transfer from the CHM to the DIM is automatic.
- **Data Retrieval:** Once a case is initiated, the system automatically fetches and records all relevant details of the suspected employee from the SAP database. This integration ensures accuracy and timely data retrieval.

- Investigation: The case is assigned to an Investigating Officer/Site Vigilance Executive (SVE). The Investigating Officer prepares the report using a predefined investigation format.
- Action on Investigation report : The DIM ensures the report preparation and review by the RVE, and subsequent routing to the HOD and CVO for perusal and final approval. In cases requiring disciplinary action, the report is forwarded to the appropriate Disciplinary Authority (DA).



Flow chart of The System

4. Key Functionalities and Benefits

The ICMS offers several key benefits and functionalities across NTPC's widespread operations:

- **Real-time Complaint Tracking:** Authorized vigilance executives can track complaints in real-time.
- **Automated Document Generation:** The system generates required documents automatically, minimizing duplication and enhancing accountability.
- **Standardization:** The platform standardizes workflows, checklists, and internal policies, enabling vigilance executives to operate with greater clarity and consistency. This is particularly helpful for officers appointed on a rotational or tenure basis.
- **Enhanced Accountability and Security:** Role-based access ensures clear accountability, reducing the risk of bias or undue influence. Every step is logged with a time stamp, ensuring the complaint is handled transparently and fairly.
- **Seamless Data Exchange:** The module's integration with SAP and other internal systems ensures seamless data exchange and strengthens institutional integrity by minimizing the scope for manipulation.
- **Operational Improvement:** The process eliminates delays caused by physical file movement between corporate headquarters and project locations, resulting in a dramatic improvement in complaint processing time and overall transparency. This ensures compliance with CVC timelines.

5. Potential for Replication (Future Application)

The integrated vigilance management system developed by NTPC is described as suitable for replication across other Central Public Sector Undertakings (CPSUs), particularly those that receive a significant volume of vigilance complaints and operate across geographically widespread areas.

Organizations that currently employ e-office or office management systems can incorporate this ICMS model with suitable changes.



Anubhav Portal

1. A brief on Anubhav Portal

The Anubhav Portal is a Preventive Vigilance Initiative developed by NTPC Limited, designed to integrate existing legacy expertise into NTPC's digital transformation journey.

The portal is a comprehensive, transparent, and efficient digital platform for the empanelment and engagement of retired executives for consultancy assignments, specifically serving non-NTPC clients such as State GENCOs, Independent Power Producers, and other utilities.

The name 'Anubhav' translates to "experience" in Hindi, symbolizing the organization's recognition of the wealth of knowledge possessed by its retired professionals. The platform leverages modern technology to institutionalize this expertise, thereby harnessing the intellectual capital of former NTPC executives to serve the power sector and the organization.

The portal was successfully launched on 1st January 2025. This initiative reflects NTPC's broader vision of embracing innovation and fostering a culture of efficiency and aligning with national goals of digital empowerment and knowledge retention.

2. Challenges before implementation of Anubhav Portal

The Anubhav Portal was developed by NTPC Limited to address several inherent challenges associated with the traditional, manual, and paper-based system used historically for engaging retired executives in consultancy roles.

The challenges and inefficiencies that necessitated the development of the portal include:

- I. **Extensive Paperwork and Administrative Delays:** The traditional manual system involved extensive paperwork, which often resulted in administrative delays and increased overhead.
- II. **Lack of Transparency:** There was a lack of transparency leading to frustration among applicants who had limited visibility into the status of their empanelment.
- III. **Process Difficulty and Vulnerability:** The coordination process across different departments was complex, time-consuming, and vulnerable to communication gaps.
- IV. **Data Security Risks:** Data security risks were inherent in the previous paper-intensive system, especially concerning confidential information being handled without modern safeguards.

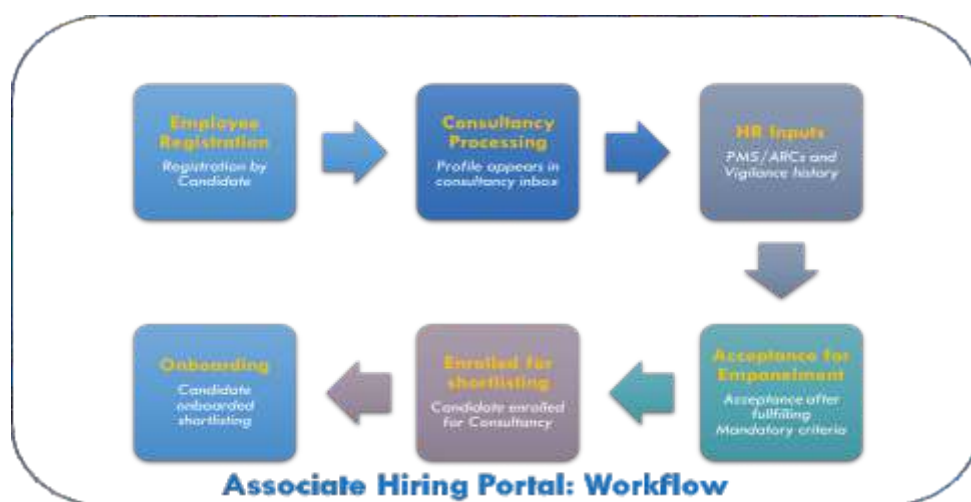
3. Implementation and Key Features

The Anubhav Portal operates as an End-to-End Automated system. As of August 31, 2025, 3,700 executives have registered on the portal, and 1,100 executives are currently empanelled.

The key features and workflow are:

- **End-to-End Automation:** The entire workflow is automated, covering registration, document submission, verification, approval by competent authority, tracking of application status, and final assignment. This digitalization replaces manual interventions, speeding up the process and reducing errors.

- **User-Friendly Interface:** The portal is designed with simplicity in mind to ensure that retired executives, regardless of their technical proficiency, can easily navigate, apply, and manage their profiles.
- **Transparency and Accountability:** A digital trail is maintained for every action within the system. This enforces transparency, trust, and visibility. Both applicants and administrators have access to real-time status updates.
- **Standardized Empanelment Process:** Empanelment follows a standardized process based on predefined criteria such as PMS score, age, and other factors as per the current HR policy.
- **Expertise Integration:** The portal includes listings for 30 experience-based requirement areas (e.g., technical audit, safety audit, FQP/L&M development).
- **Auto-Fetching of Data:** Data for enrolment, including experience, training, and other details, are automatically fetched from employee records available with NTPC.
- **Consultancy Assignment Integration:** The platform serves as a centralized repository for talent, enabling NTPC Consultancy to identify and engage retired professionals for specific projects based on their expertise.
- **Automated Notifications:** An automated email is sent on the 1st of the month following superannuation, with a reminder after 15 days. Interested employees can submit their details and preferred areas via a specific email address. Shortlisted candidates are invited for an interview before final selection.



4. Benefits of Anubhav Portal

The deployment of the Anubhav Portal by NTPC Limited has brought about significant benefits by transforming the engagement of retired executives from a manual system to a comprehensive digital platform. These benefits span operational efficiency, transparency, and the strategic leveraging of intellectual capital.



The key benefits of the Anubhav Portal are:

I. Operational Efficiency and Streamlined Processes

- **Streamlined Processes:** The portal has successfully eliminated the redundancies of the old manual system. Tasks that previously took weeks can now be completed in days, thanks to end-to-end automation.
- **Reduced Administrative Burden:** The registration, verification, and empanelment cycle is now smoother and faster, resulting in a reduction of the administrative burden and improving overall responsiveness.
- **End-to-End Automation:** The entire workflow, encompassing registration, document submission, verification, approval by competent authority, tracking of application status, and final assignment, has been fully digitized. This replacement of manual interventions leads to a speed-up of processing and a reduction in errors.

II. Enhanced Transparency and Accountability

- **Full Visibility of Status:** Retired executives no longer have to rely on phone calls or follow-ups to track progress. This provides enhanced transparency and visibility into the status of their applications.
- **Digital Trail and Trust:** The transparency inherent in the system not only enhances the user experience but also strengthens NTPC's image as an accountable organization. A digital trail is maintained for every action within the system, enforcing transparency, trust, and visibility.

III. Leveraging Institutional Knowledge and Expertise

- **Harnessing Intellectual Capital:** The portal provides a systematic, strategic platform for leveraging the institutional knowledge of retired NTPC executives.
- **Ensuring Continuity of Expertise:** Executives carry decades of experience in domains like power generation, engineering, project management, finance, and corporate governance. Through Anubhav, this valuable intellectual capital is retained and utilized in a structured manner, ensuring continuity of expertise.
- **Talent Repository:** The platform functions as a centralized repository for talent, allowing NTPC Consultancy to easily identify and engage retired professionals for specific projects based on their expertise.

IV. Data Security

- **Confidentiality and Integrity:** The platform includes robust security protocols to ensure the confidentiality, integrity, and compliance of personal and organizational data.

5. Potential for Replication: A Scalable Model for Wider Impact

The success of the Anubhav Portal is valued as more than just an internal tool; it has the potential to become a replicable model for organizations across various sectors, particularly within the public sector domain.

The replicability potential is seen in two main areas:

- I. **Other CPSUs and Government Bodies (Institutional Adaptation):** The model is suitable for Central Public Sector Undertakings (CPSUs) and other government organizations facing similar challenges when engaging retired personnel for advisory or consultancy roles. The portal offers a blueprint for these entities to digitize their own processes, thereby ensuring consistency, efficiency, and transparency.
- II. **Sector-Specific Adaptations (Industry Adaptation):** Industries that are heavily reliant on specialized, legacy knowledge—such as oil & gas, power transmission, renewable energy, infrastructure, and banking—can benefit immensely by adopting a similar digital framework. The platform can be adapted to cater to consultants, mentors, advisors, or part-time strategists, creating a structured channel for knowledge transfer and capacity building.





Other Preventive Vigilance Mechanism in NTPC

I. Online Vigilance Clearance System (OVCS)

- **Description:** NTPC developed and standardized the OVCS to ensure the transparent, efficient, and secure processing of mandatory employee clearances. This clearance is required for various purposes, including promotions, sabbaticals, foreign visits, retirement, pre-mature retirement/passport/visa, higher studies, and other services.
- **Implementation/Integration:** The system seamlessly integrates four key platforms: the HR Unified Service System (HRUSS), the Annual Property Return Portal, the ERP/SAP (vigilance records), and E-Office (PRADIP).
- **Workflow:** Requests are auto-processed. If no vigilance history exists against the employee, clearance is granted instantly. Cases with pending or recorded vigilance actions are routed online to the Vigilance Department for processing.
- **Impact:** The initiative has reduced clearance time from weeks to days, minimized manpower needs, and eliminated paper movement. The model is scalable and replicable across organizations with large, geographically dispersed workforces.

II. Vigilance Digital File Access Module

- **Description:** This module was developed and implemented to enable a user-friendly way to access digital files.
- **Purpose:** It ensures faster and secure access to digital files required for complaint disposal and scrutiny in a transparent manner.
- **Functionality:** Through this digital platform, Vigilance Executives can directly raise an online access request in the E-Office system. The request is routed to a designated Nodal Officer for approval. Once approved, the executive gains secure access to the required file(s) within the centralized digital repository of E-Office.
- **Impact:** This system replaces traditional practices involving lengthy and manpower-intensive coordination across multiple locations.

III. Vigilance Miscellaneous Approvals Module (VMAM)

- **Description:** NTPC developed the VMAM to streamline the initiation and approval of routine vigilance functions using a Single Window.
- **Functionality:** It is specifically designed for Corporate Vigilance executives to handle activities such as:
 - o Vigilance clearance.
 - o Approval of Agreed & ODI lists.

- o Review of policies.
- o Approval of internal/external reports.
- o FSA/SSA from CVC
- **IMPACT:** By digitizing approvals, the module ensures faster processing, improved transparency, and secure record-keeping, enhancing efficiency and accountability. It also provides role-based access to past files, functioning as a secure digital repository for vigilance records. It is extensively used for approvals related to reports/data for the CVC, MOP, CBI, and NTPC functions, among others.

IV. Standard Quality Plans for regular O&M Items

- **Description:** This initiative implemented a unified standard quality plan for regular Operation & Maintenance (O&M) materials.
- **Problem Addressed:** The goal was to address issues of inconsistency, supplier grievances, and financial discrepancies arising from multiple quality plans across stations.
- **Implementation:** Manufacturing quality plans have been standardized and uploaded in the Enterprise Resource Planning System (SAP). This includes the requirement for Pre-Dispatch Inspection items under Corporate Quality Assurance guidelines.
- **Impact:** This standardization ensures consistency, transparency, and efficiency in procurement. It also enables automated Purchase Requisition approval and tendering, reducing manual intervention and ensuring uniform compliance.

V. NTPC NIVARAN – Digital Platform for E-Office Service Requests

- **Description:** NIVARAN is an in-house digital platform developed by NTPC to streamline E-Office-related service requests. It serves as a single, user-friendly system, accessible on both web and mobile platforms.
- **Problem Addressed:** Previously, service requests related to E-Office functions (such as file movement, file access, approvals, and other support) depended on multiple channels, leading to delays and inefficiencies.
- **Functionality:** The platform enables employees to raise, track, and monitor E-Office service requests seamlessly. Key features include configurable workflows, real-time notifications, task allocation, and automated reminders.
- **Impact:** By digitizing E-office service request management, NIVARAN has eliminated redundancies, reduced manual follow-ups, and enhanced transparency. The initiative promotes faster disposal and accountability, strengthening overall governance, and serves as a replicable best practice.









Power Finance Corporation Limited

Strengthening Preventive Vigilance: Empowering Transparency through Digital Portals

In today's fast-changing governance landscape, staying ahead of risks requires more than just reacting to problems—it calls for smart, proactive solutions. Power Finance Corporation Limited (PFC), India's largest government-owned NBFC, has taken a leap forward in that direction. With the launch of three digital platforms—the **Vigilance Complaint Portal**, **Vendor Grievance Redressal Portal**, and **Employee Grievance Redressal Portal**—PFC is moving beyond traditional vigilance practices. These tools are designed not just to resolve issues, but to identify early warning signals, fix systemic gaps, and build a culture of transparency and accountability across the board.

EMPOWERING TRANSPARENCY THROUGH DIGITAL PORTALS



VIGILANCE
COMPLAINT
PORTAL



VENDOR
GRIEVANCE
REDRESSAL
PORTAL



EMPLOYEE
GRIEVANCE
REDRESSAL
PORTAL

1. Problem Statement

Given the vast operational scale, substantial financial transactions, and intricate stakeholder ecosystem, PFC is inherently exposed to corruption-related risks. Traditionally, Vigilance officials at PFC



engaged in vendor meetings to raise awareness about existing vigilance mechanisms aimed at addressing unresolved grievances. However, conventional vigilance frameworks have largely centered on post-facto investigations and punitive actions, often addressing issues only after they have occurred. Drawing from practical experience, the following illustration highlights the key challenges encountered under this approach.

The challenges are multifaceted



Information Asymmetry

Potential wrongdoings often remain unreported



Systemic Loopholes

Complex tracking resulted in delays and inefficiency



Delayed Redressal

Unaddressed grievances may lead to unethical demands



Reactive Posture

Over-reliance on investigations allows damage to occur



Lack of Collective Ownership

Responsibility for vigilance feels confined to a department

2. PFC has operationalized three key digital platforms:

- The Vigilance Complaint Portal
- The Vendor Grievance Portal
- The Employee Grievance Portal

a) The Online Vigilance Complaint Portal: Empowering Citizens Voice

The Vigilance Complaint Portal is designed as a secure, user-friendly, and highly accessible digital portal for reporting suspected instances of corruption, malpractices, or unethical conduct within the organization.

- **Purpose and Philosophy:** This portal moves beyond a mere suggestion box. Its core purpose is to democratize vigilance, transforming every employee, stakeholder, and concerned citizen into a potential partner in upholding integrity. It is built on the premise that early detection and timely intervention are paramount to preventive vigilance. By providing an easy and secure reporting mechanism, it is aimed to capture early warning signals that might otherwise go unnoticed or unreported through traditional channels.

KEY FEATURES AND FUNCTIONALITY



- o **Intuitive Interface:** Designed for ease of use, ensuring that individuals from diverse technological backgrounds can navigate and submit complaints effortlessly.
- o **Secure Registration/Login:** Robust authentication mechanisms to ensure the authenticity of complainants.
- o **Digital Evidence Upload:** Provision for uploading supporting documents, images, or files, which are crucial for substantiating allegations and expediting investigations.
- o **Unique Complaint ID & Tracking:** Upon submission, each complaint is assigned a unique identifier, allowing the complainant to track the real-time status of their complaint without needing direct contact, thus ensuring transparency in the process.
- o **Confidentiality Safeguards:** Advanced encryption and access controls ensure that the identity of the complainant and the details of the complaint are protected at all stages, mitigating fears of victimization.



- **Direct Routing & Timely Action:** Complaints are immediately routed to the designated vigilance officers, triggering a predefined workflow for preliminary inquiry, investigation, and resolution within stipulated timelines.
- **Contribution to Collective Mechanism:** This portal significantly strengthens the collective vigilance mechanism by:
 - **Systemic Data Collection:** The digital nature of the portal allows for the aggregation of data on complaint types, departments involved, and recurring issues, enabling the vigilance department to identify systemic vulnerabilities and patterns of corruption. This data is invaluable for proactive policy changes and process improvements.
 - **Promoting Accountability:** The transparent tracking mechanism holds the vigilance department accountable for timely and fair resolution, reinforcing trust in the system.

b) The Vendor Grievance Portal: Fostering Fair Play in Procurement

- **Purpose and Philosophy:** This portal is rooted in the principle that a healthy vendor relationship is a cornerstone of ethical business. Unaddressed vendor grievances often lead to frustration, disputes, and, in some cases, can create fertile ground for unethical demands or collusion. By providing a formal, transparent, and efficient channel for vendors to voice their concerns, we aim to pre-empt disputes, ensure fair treatment, and eliminate any perceived or actual unfair practices in our procurement and contract management processes. It acts as a preventive check against potential irregularities in the supply chain.
- **Key Features and Functionality:**
 - **Dedicated Vendor Interface:** A separate, secure portal specifically tailored for our registered vendors, allowing them to submit grievances related to tenders, contract awards, payment delays, quality assessments, or any perceived unfair practices.
 - **Transparent Tracking System:** Similar to the vigilance portal, vendors receive a unique grievance ID and can track the progress of their complaint through various stages of resolution, ensuring complete transparency.
- **Contribution to Collective Mechanism: The Vendor Grievance Portal strengthens the collective mechanism by:**
 - **Building Trust and Reputation:** A fair and responsive grievance mechanism builds trust with our vendor ecosystem, attracting better quality suppliers and fostering healthier business relationships.
 - **Data for Process Improvement:** Analysis of vendor grievances can highlight bottlenecks, procedural ambiguities, or areas of high discretion in procurement, allowing for targeted process re-engineering and policy revisions to prevent future issues.

c) The Employee Grievance Portal: Cornerstone of Organizational Health

- **Purpose and Philosophy:** The Employee Grievance Portal was conceived as a cornerstone of our proactive vigilance strategy. Its fundamental philosophy lies in fostering a transparent, responsive, and accountable organizational culture. By empowering employees with a structured

and secure platform to voice their concerns, the portal ensures that grievances are addressed at the source—well before they escalate into larger systemic issues.

- **Key Features and Functionality**

- **User-Friendly Interface:** The portal is designed to be intuitive and easily accessible to employees across all levels of the organization.
- **Confidential Submission:** Employees can submit grievances with the assurance of confidentiality, encouraging candid and open communication.
- **Categorization and Tracking:** Grievances are categorized by type, ensuring transparent monitoring and timely resolution.
- **Escalation Matrix:** Built-in escalation protocols ensure that unresolved issues automatically progress to higher authorities, reducing bottlenecks and delays.

- **Contribution to the Collective Mechanism:** The Employee Grievance Portal serves as a critical feedback loop within the organization's broader vigilance and governance ecosystem. It not only resolves individual concerns but also provides data-driven insights into recurring issues, procedural bottlenecks, and potential vulnerabilities. These insights inform policy refinement, systemic corrections, and capacity-building efforts, thereby reinforcing a culture of integrity.

3. Impact Analysis: A Paradigm Shift towards Proactive Integrity

While all the three digital portals i.e. Vigilance Complaint Portal, Vendor Grievance Redressal Portal and Employee Grievance Redressal Portal have been launched during Vigilance Awareness Week 2024. The quantitative data for three portals till 31.03.2025 are tabulated below:

Quantitative Analysis:

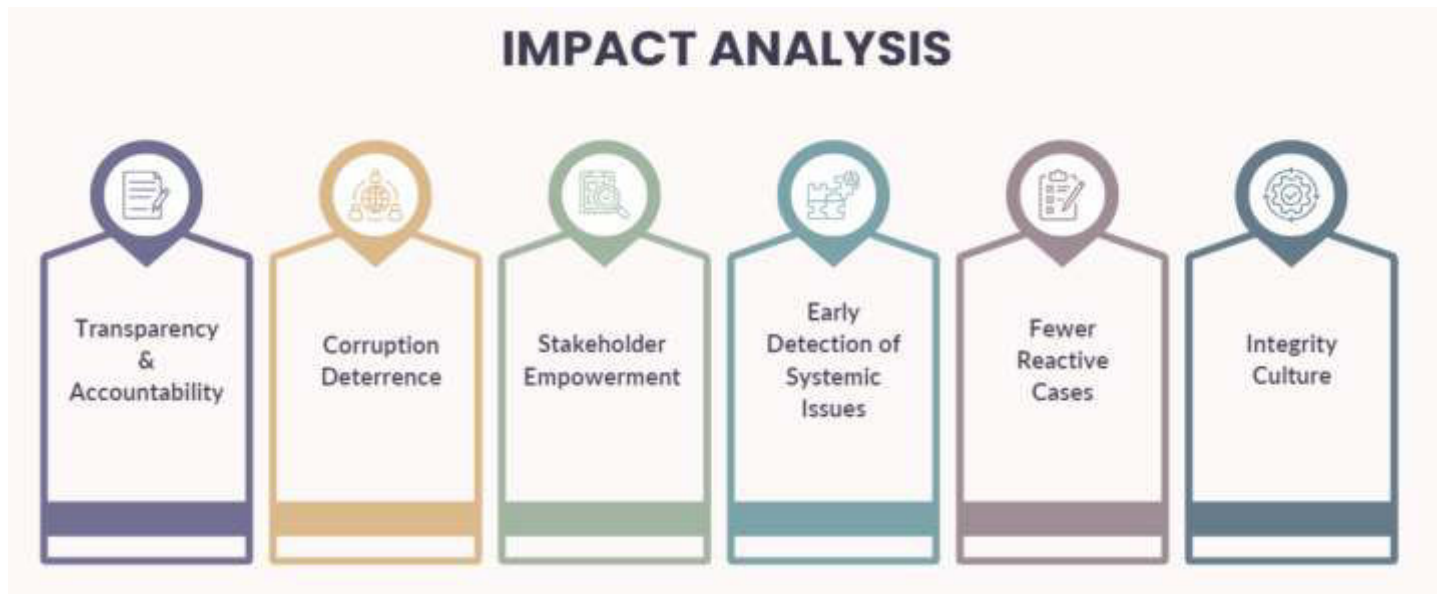
S. No.	Digital Portal	Number of Grievances/ Complaints (in no.)	Average time taken to dispose grievance/ complaint (in days)
1	Vigilance Complaint Portal	6	48 days
2	Vendor Grievance Redressal Portal	0	NA
3	Employee Grievance Redressal Portal	0	NA

The quantitative data and their long-term impact is still nascent, the qualitative shifts and anticipated benefits are already profoundly clear. These initiatives are not merely digital tools; they are catalysts for a cultural transformation and proactive approach within the organization.





Qualitative Analysis:

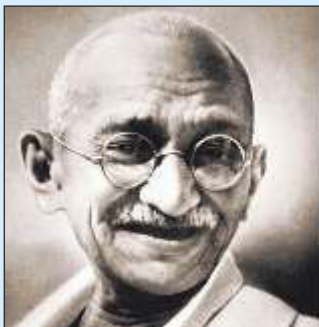


- **Transparency & Accountability:** The portals enhance transparency by making previously processes visible and ensuring complaints/grievances are systematically tracked and addressed.
- **Corruption Deterrence:** Accessible and secure reporting channels discourage unethical behaviour by increasing the risk of detection.
- **Stakeholder Empowerment:** Employees, vendors, and the public can actively report concerns, promoting shared responsibility in maintaining integrity.
- **Early Detection of Systemic Issues:** Digital data enables pattern analysis to identify risks and prevent misconduct proactively.
- **Fewer Reactive Cases:** Early intervention and systemic improvements reduce the need for complex vigilance investigations.
- **Integrity Culture:** The portals reinforce ethical behaviour and promote a values-driven organizational culture.

4. Future endeavours will focus on:

- **Advanced Data Analytics for Predictive Vigilance:** Leveraging advanced data analytics, potentially incorporating Artificial Intelligence, to process the vast amounts of data generated by these portals. This will move beyond identifying patterns to predicting potential areas of risk and proactively deploying preventive measures.
- **Broadening the Scope of Preventive Initiatives:** While the portals are crucial, preventive vigilance efforts will extend to continuous review and simplification of complex procedures, regular ethics training for all employees, and fostering a culture of zero tolerance for corruption through leadership by example.

- **Sustained Awareness Campaigns:** Regular and innovative awareness campaigns will be conducted to ensure that all stakeholders are consistently reminded of the available channels and their role in upholding the organization's integrity.



“ 'You must be the change you wish to see in the world' ”

Mahatma Gandhi



From Inspection to Implementation: How Vigilance Strengthened TRA Appointments at PFC

Acting on systemic recommendations from PFC's Vigilance Unit, comprehensive reforms were introduced in the appointment of TRA (Trust and Retention Account) Bankers- ensuring greater transparency, independence, and control in project finance. The overhaul has led to measurable improvements, including reduced concentration risk, enhanced oversight, and a more accountable selection process.

Background: PFC, Project Finance and the Rise of SPVs

India's major infrastructure advances, especially in the power sector, are underpinned by sound financing models. Power Finance Corporation Limited (PFC), a Maharatna PSU, has become a cornerstone of this landscape, supporting the nation's ambitious transmission, generation, and renewable energy initiatives. A growing trend in modern project finance is the use of Special Purpose Vehicles (SPVs)- standalone companies formed solely to build, own, and operate a specific project (like a solar park or wind farm).

SPVs help isolate financial risk to a single project, without cross-contaminating the promoter's other ventures or assets. But with this structure comes a new challenge: ensuring project revenues and expenditures remain fully "ring-fenced" inside each SPV, and are not diverted to other uses—making control over cash flows a non-negotiable necessity for lenders like PFC.

Understanding TRA: The Safety Net in Project Financing

To tightly regulate these cash flows, lenders mandate the use of a Trust and Retention Account (TRA). The TRA sits at the very heart of every funded project's financial transactions. Here's how the concept works:

- **Single Gateway:** All the project's incomes—be they from power sales, equity infusion, government grants, or loan disbursements—must be deposited into the designated TRA.
- **Orderly Disbursement:** Payments from the TRA follow a pre-determined priority: first for statutory dues, next for essential operations and maintenance, then for loan repayments and interest, and only after that for returns to the promoter or other uses.
- **No Side-Stepping:** The SPV's management cannot route funds elsewhere or make payments at their own sole discretion. The TRA Banker, who operates the account, follows strict contractual rules prescribed by the lender.

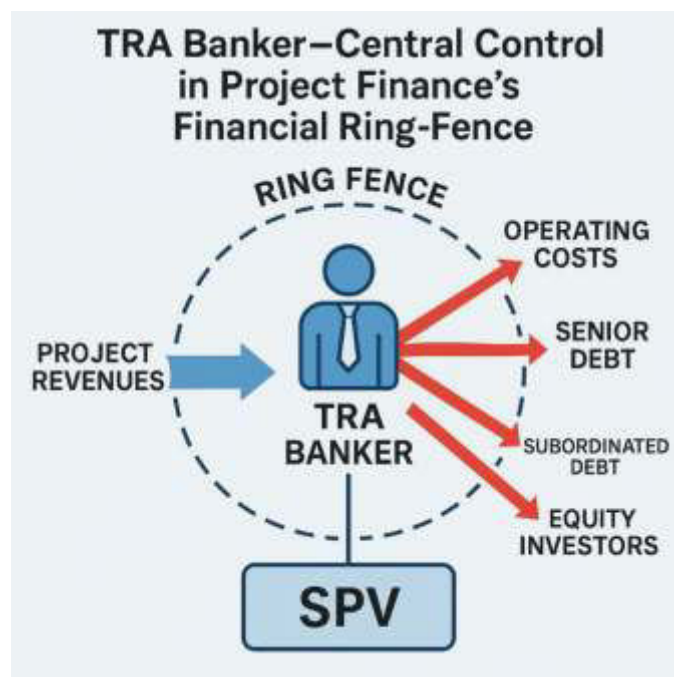
A key strength of the TRA framework lies in its tri-partite agreement among the lender, borrower, and TRA Bank. This legal arrangement ensures that the lender's instructions always take precedence over the borrower's- whether it comes to setting limits like the O&M budget, approving any withdrawal of surplus funds, or when a project faces difficulties and the TRA is invoked due to default. Every critical transaction, especially during stress scenarios, requires lender approval, blocking any unilateral action. Independent mechanisms like quarterly reviews by the Lender's Financial Advisor (LFA) further reinforce oversight, making the entire process robust, transparent, and lender-friendly.

The Central Role and Importance of the TRA Banker

The TRA Banker (a scheduled commercial bank approved by the lender) does far more than provide

routine banking services. Based on the TRA Agreement (as seen in typical project contracts), the TRA Banker acts as:

1. **Trustee and Custodian:** Funds in the TRA are legally ring-fenced- held in trust, and not as general assets of either the bank or SPV. They cannot be claimed by creditors of the promoter or the bank.
2. **Gatekeeper of Project Funds:** All outgoing payments require written instructions and must conform to the contractually agreed “waterfall”- meaning the set order of payment priorities.
3. **Watchdog and Reporter:** The TRA Banker must record and report all transactions, maintain sub-accounts for various operational heads, and quickly alert lenders about defaults or irregularities.
4. **Impartial Enforcer:** In the event of default, the lender’s instructions override all others, including the borrower’s, ensuring independent intervention if needed.



This strict framework is what allows project finance via SPVs to work on a large national scale- enabling lenders to fund multiple projects promoted by the same business group without fear of cash “leakage” between them.

Risks and Challenges in TRA Management and Appointment

Even with robust frameworks, certain operational and structural risks must be vigilantly managed to preserve the integrity of the TRA system:

1. Turnaround and Efficiency Concerns

Delays or inconsistencies in appointing the TRA Banker or executing the TRA Agreement can result in project funds being disbursed into accounts that are not governed by the agreed controls, heightening the risk of fund diversion or misuse by the borrower. Such lapses undermine lender oversight and may jeopardize the intended security structure. Timely appointment and operationalization of the TRA are therefore essential to maintain financial discipline and mitigate exposure to unauthorized transactions or non-compliance.

2. Operational Gaps in Information and Monitoring

As the project portfolio grows rapidly, critical details such as project costs, promoter group relationships, or consortium lending structures are often missing or inadequately recorded in TRA appointment files. This lack of data impairs management’s ability to effectively identify interconnected exposures, increasing the risk of concentration, potential fund diversion between group companies, or conflicts of interest going unnoticed. Without systematic collection and real-



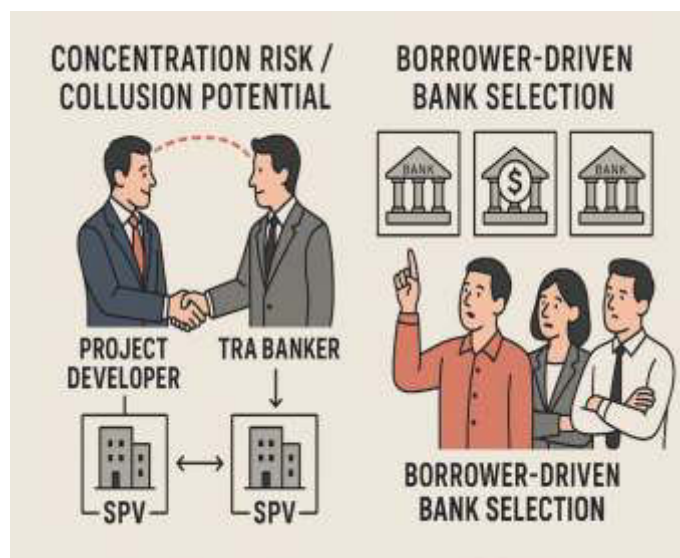
time monitoring of this information, key risks may not be spotted or mitigated in a timely manner, exposing the organization to vulnerabilities in governance and control

3. Concentration Risk / Collusion Potential

If the same TRA Banker is assigned to multiple SPVs under one promoter group, there is a risk that a close relationship may develop between the project owner and the banker. In rare but serious scenarios, this could facilitate undue accommodation, circumvention of controls, or even synchronized fund movements between SPVs—effectively breaking the ring-fence.

4. Borrower-driven Bank Selection

When project developers request their preferred banks as TRA Bankers- often due to existing commercial ties, working capital relationships, or operational convenience, there is an increased risk that independence may be diluted.



5. Systemic Stability and Feedback Loops

If a bank's financial health declines or its performance as a TRA agent becomes inadequate, the absence of prompt review or mechanisms for intelligence sharing among institutions can result in delayed detection of such risks, potentially leaving exposures unaddressed until significant issues arise

All these factors highlight why vigilant, objective, and transparent appointment and review processes for TRA Bankers are essential.

PFC's Preventive Vigilance Initiative: Strengthening Controls

As part of a preventive vigilance initiative, PFC's Vigilance Unit conducted a detailed inspection of the TRA Banker appointment process. Based on the gaps identified, it recommended systemic improvements to enhance transparency and reduce risk. Acting on these recommendations, PFC introduced a series of reforms- including a codified SOP and stricter oversight norms, ensuring that controls evolve in tandem with business expansion. This proactive approach ensured that even as business expanded and diversified, controls kept pace to protect lender interests.

Key Elements of PFC's Enhanced Process

- **Codified Appointment Procedure:**

All appointments are now governed by a clear Standard Operating Procedure (SOP) that leaves no room for ad-hoc relaxations. This ensures that TRA Bankers are selected in a pre-determined, transparent, and traceable manner.

- **Equitable Assignment and Hard Limits:**

To avoid concentration risk, no single bank can have more than ten new or twenty-five active TRA assignments at any time. Appointments follow a “least served first” principle- banks with fewer active assignments are preferred, thus ensuring that no promoter can cluster all their group SPVs under one TRA Banker.

- **Objective Exception Handling:**

Any deviation from the standard process (such as business exigencies) requires detailed justification and approval from senior-most management- ensuring accountability and minimization of discretion.

- **Continuous Risk and Performance Monitoring:**

Each empaneled TRA Banker is subject to regular credit rating assessments. Their actual performance as a TRA is tracked post-appointment via a feedback and Key Result Area (KRA) evaluation process.

- **Annual Policy Refresh and Review:**

The overall empanelment panel and assignment guidelines are reviewed every year, incorporating lessons learned, market developments, and feedback from both internal and external stakeholders.

- **Aspiration for Ecosystem Vigilance:**

While currently there is no national-level system for negative feedback across financiers, PFC’s process advocates for such collaboration, envisioning cross-institutional learning as a future enhancement.

How Equitable Allocation Mitigates Risks

One of the most crucial upgrades is the strong check on concentration risk. By ensuring SPVs under the same promoter cannot be assigned the same TRA Banker beyond a strict limit, PFC breaks any path for possible undue influence or accommodation.

- **Independence Preserved:**

Each SPV’s financial flows remain watched by an independent third party (the TRA Banker), making collusion, coordinated fund redirection, or oversight lapses from impacting multiple projects highly unlikely.

- **Accountability and Transparency:**

Every selection, performance evaluation, and exception is logged and can be independently audited, supporting proactive and retrospective vigilance.

Impact of the New Vigilance Measures

Qualitative Outcomes

- **Organizational Transparency:** The SOP removes ambiguity and subjective discretion from assignments, fostering a culture of fairness and compliance.



- **Risk Mitigation:** Instances of concentrated TRA assignments have reduced, meaning the potential for system-wide exposures has fallen dramatically.

Quantitative Improvements

- **Faster Processing:** Average appointment time is stabilized at 17 days, replacing past variability from as quick as 1 day to as much as 160 days.
- **Distribution Data:** Internal dashboards confirm substantially more even spread of TRA Bank appointments post-reform.

Positive Work Culture

- A system of feedback, annual review, and technology-enabled tracking empowers both managers and operational staff. The clearly-articulated, structured process creates confidence in checks and balances at every step.



Scope for Broader Application

While these reforms are rooted in the context of infrastructure project finance, the broad principles—structured procedures, checks on risk concentration, regular performance monitoring, and technology-driven oversight—can be readily adapted by other lenders, NBFCs, and public sector undertakings. They are also recommended for any scenario where funds must be segregated, prioritized, and protected from misuse in complex projects or multi-entity ecosystems.

The Road Ahead: Fortifying Controls with Technology

Building on these reforms, the next horizon involves even deeper digital and analytical integration:

- **Digital Dashboards and Real-Time Monitoring:**

Transaction-level data from all TRA accounts could be automatically tracked with defined alerts for any deviation from agreed parameters.

- **AI-based Anomaly Detection:**

Machine learning models can analyze transaction patterns and flag early signals of potential fund diversion or collusive behavior—across multiple projects, SPVs, or even connected borrowers.

- **Dynamic Risk Scoring:**

Each TRA Banker's live assignments, ratings, and performance could be scored, driving risk-based oversight and prioritization of audits.

- **Sector-wide Intelligence:**

Advocacy towards a central fraud registry or negative feedback portal that all large infrastructure financiers could access—enabling sector-level learning from isolated adverse events.

While appointment of a banker happens once per project, controls around ongoing operations, transaction monitoring, and compliance will remain vital as PFC and other institutions navigate an ever-evolving landscape.

Conclusion

PFC's recent initiatives to reform and reinforce the process of empaneling and appointing TRA Bankers represent a robust and replicable model of preventive vigilance. These measures close risk gaps, embed transparency, and safeguard project funds across India's enormous infrastructure pipeline. As vigilance awareness and technology tools grow, these best practices will continue to protect public resources, ensure project success, and inspire a culture of compliance across sectors.







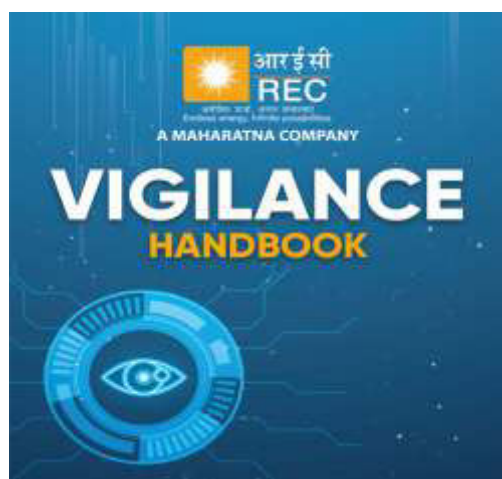
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REC

असीमित ऊर्जा, अनन्त संभावनाएं
Endless energy. Infinite possibilities.



Comprehensive Vigilance Handbook



In a strategic move to foster transparency and ethical conduct, REC Limited launched a comprehensive Vigilance Handbook. This initiative aims to empower employees with clear, accessible guidelines on vigilance procedures, thereby strengthening preventive vigilance and promoting a culture of integrity across the organization.

Features of the Vigilance Handbook:

- **Comprehensive Compilation:** The handbook consolidates essence of circulars, orders and guidelines issued by the Government of India and the Central Vigilance Commission relevant to REC's operations.
- **User-Friendly Approach:** The document is structured in a clear, easy-to-navigate format, making it accessible to employees at all levels.
- **Digital Accessibility:** To ensure widespread usage, the handbook was made available in digital format on REC's intranet portal. This allows employees to access it anytime.
- **Training Integration:** The handbook is integrated into REC's trainings. New recruits and existing employees undergo sessions that familiarize them with the contents and applications of the handbook.

- **Departmental Distribution:** Hard copies were distributed across departments, especially those dealing with sensitive functions like procurement, finance, and project management.



Impact & Benefits

The campaign has yield positive outcomes:

- **Increased Awareness:** Employees are more informed about the rules and their implications.
- **Preventive Vigilance:** Early education helps prevent misconduct before it occurs.
- **Improved Compliance:** A noticeable improvement in adherence to ethical standards and procedures.
- **Enhanced Transparency:** Promotes a transparent work environment where rules are known and respected.

Potential for Replicability

- The initiative is not limited to a specific

department or cadre—it applies to all employees across REC, whether in engineering, finance, HR or administration.

- The use of digital platforms ensures that the message reaches everyone, regardless of location or role.
- This initiative can be easily replicated across other organisations.

Way Forward

Periodic Refresher Campaigns: sending reminders and updates at regular intervals, **Interactive Sessions:** Organizing webinars or Q&A sessions to clarify doubts and encourage dialogue and **Feedback Mechanism:** Allowing employees to share suggestions or concerns regarding CDA Rules shall provide sustainability to the initiative and will further build up momentum.



Strengthening Cyber Resilience: REC's Strategic Cybersecurity Framework



Background

Given REC's critical role as a PSU NBFC in financing national infrastructure and power projects, the need for a robust cybersecurity framework is paramount. The increasing sophistication of cyber threats, regulatory mandates, and the growing reliance on digital platforms demand proactive protection of sensitive financial and operational data. Advanced measures such as real-time threat monitoring through SOC and rigorous VAPT exercises are required to safeguard assets, maintain business continuity and uphold stakeholder trust.

Implementation

REC Limited has demonstrated a strong commitment to cybersecurity by implementing a technically advanced, and governance-driven security framework. The organization has successfully established industry-leading practices in information security, risk, resilience, international certifications, and awareness, making REC a benchmark PSU NBFC in cybersecurity preparedness. The key measures are detailed below:

1. ISO 27001 Certification & Information Security Governance

- REC holds ISO 27001 certification, recognized globally as the gold standard for Information Security Management Systems (ISMS).
- Regular security and risk audits are conducted both by CERT-In (GoI) empanelled auditors and external certifying bodies, ensuring compliance with regulatory standards and continuous improvement of ISMS controls.
- The certification reflects REC's maturity in areas such as risk management, access control, incident management, asset management, and compliance monitoring.

2. Security Operations Centre (SOC) with Advanced SIEM

- A state-of-the-art SOC has been deployed, equipped with an advanced Security Information and Event Management (SIEM) tool.
- Proactive monitoring enables early detection of suspicious activities, insider threats, malware campaigns, and anomalous behaviour patterns, thereby minimizing detection and response times.
- Workflows and well-defined incident response processes ensure instant control and resolution.

3. Business Continuity & Disaster Recovery (BCP/DR) Implementation

- A Business Continuity Plan (BCP) and Disaster Recovery (DR) Plan are implemented for all critical business operations, aligned with RBI and GoI guidelines.
- REC operates from a primary Data Centre (Noida) and a Disaster Recovery Centre (RECIPMT, Hyderabad) with real-time synchronous data replication.

- Periodic DR drills are successfully conducted to validate the readiness of recovery processes, ensuring minimal downtime.

4. National Cyber Security Awareness Month (NCSAM) Initiatives

- In line with CERT-In, GoI guidelines, REC actively performs National Cyber Security Awareness Month (October) every year.
- Each year, awareness campaigns, workshops, competitions, and cyber hygiene initiatives are organized for employees.
- These initiatives promote a security-first culture, encouraging employees to adopt safe digital practices such as information security policies, phishing identification, safe browsing, and responsible handling of organizational data.

5. Risk Assessment & Regular Vulnerability Assessments & Penetration Testing (VAPT)

- Periodic VAPT exercises are conducted through CERT-In empanelled auditors to identify vulnerabilities in networks, servers, and applications.
- Risk assessments are done and findings are remediated under a well-defined management process.
- These activities protect REC against from web application exploits to infrastructure-level intrusions, thereby reducing the risk exposure significantly.

6. Social Engineering Simulations & Cybersecurity Awareness Programs

- Regular phishing simulations and social engineering exercises are conducted to test employees' cyber preparedness under real-world attack scenarios.
- Employees are trained to recognize and report suspicious emails, preventing credential compromise and insider risks.

- Dedicated awareness sessions are conducted with internal and external experts covering latest threat trends, ransomware prevention, infra security, and regulatory compliance requirements.

Impact & Benefits

REC's comprehensive cybersecurity framework has significantly strengthened its digital resilience, ensuring the protection of sensitive financial and operational data. The implementation of ISO 27001 standards, advanced threat monitoring via SOC, and regular VAPT exercises has minimized vulnerabilities and improved incident response times. These measures have enhanced stakeholder confidence, ensured regulatory compliance, and fostered a culture of cyber awareness across the organization—positioning REC as a benchmark PSU NBFC in cybersecurity excellence.

Potential for Replicability

The governance-driven nature of REC's cybersecurity model makes it highly replicable across other public sector undertakings, financial institutions and infrastructure-focused organizations. Its alignment with national guidelines (CERT-In, RBI) and international standards (ISO 27001) ensures adaptability to various operational environments. By adopting similar frameworks, peer organizations can improve risk management, regulatory compliance and operational continuity.

Way Forward

Cybersecurity is an ever evolving and dynamic field. Continuous adoption of latest innovation and global best practices will ensure that REC shall remain secured and future-ready in a continuous cyber threat driven landscape.



**DAMODAR
VALLEY
CORPORATION**







Best Practices in DVC: Digital Land Record Management for Sustainable Land and Flood Governance in Damodar Valley Basin

“Transforming Damodar Valley Corporation's land records for enhanced efficiency and strategic decision-making”

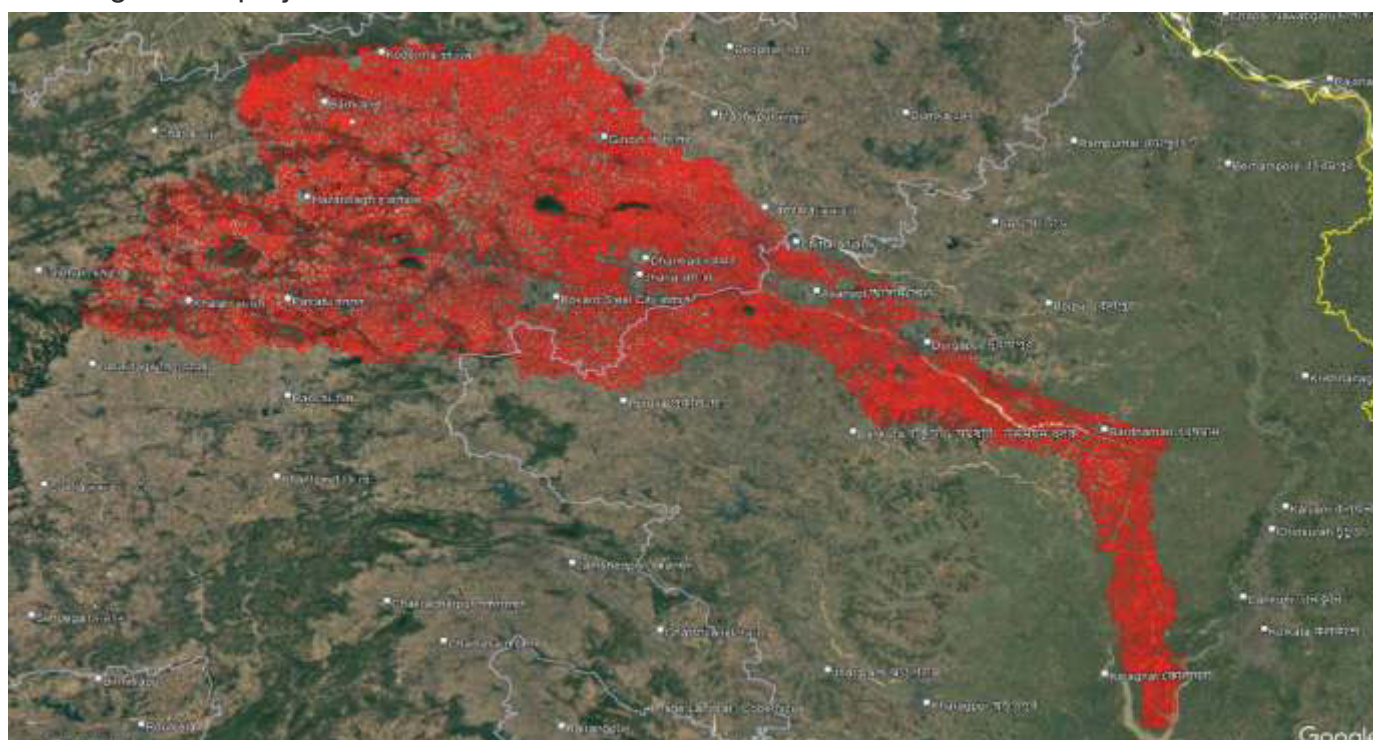
1. Digital Land Record Management for Sustainable Land and Flood Governance in the Damodar Valley Basin in DVC

Damodar Valley Corporation (DVC) has implemented a key preventive vigilance best practice centered on Digital Land Record Management for Sustainable Land and Flood Governance in the Damodar Valley Basin.

This initiative addresses systemic legacy issues related to DVC's vast land holdings by leveraging geospatial technology to enhance efficiency, transparency, and strategic decision-making.

2. Challenges before implementation of digitisation

Damodar Valley Corporation (DVC) faced several systemic and legacy challenges related to the management of its extensive land holdings prior to implementing the Digital Land Record Management System (LRMS). DVC holds over one lakh acres of land across Jharkhand and West Bengal for its projects.



Pic 1: DVC Command Area



These challenges were recognized by the Vigilance Department as key areas leading to complaints and administrative vulnerabilities, making digitization a necessary preventive vigilance measure.

The core challenges before the implementation of the LRMS were:

I. Land Disputes and Vigilance Complaints

- Land Disputes and Encroachment: The Vigilance Department was consistently receiving numerous complaints regarding land-related issues concerning encroachment of DVC Land.
- Fraudulent Compensation Claims: Complaints often focused also on fraudulent claims for compensation lodged by individuals who were posing as legitimate land-losers or affected farmers eligible for crop compensation etc.

II. Issues with Existing Land Records

- Fragmented Records: Many of the organization's land records were fragmented, scattered across various offices, outdated, or damaged.
- Lack of Centralized Status: There was no single platform available to track critical land details such as ownership, usage, or encroachment status.
- Legal Status Ambiguity: The lack of comprehensive, centralized records resulted in unclear legal status for many land parcels.

III. Operational and Administrative Inefficiencies

- Administrative Inefficiencies: The gaps and fragmentation in land records led to administrative inefficiencies.
- Recurring Disputes and Delays: The combination of fragmented records and lack of a central platform caused recurring disputes and delays in regulatory and compliance matters.

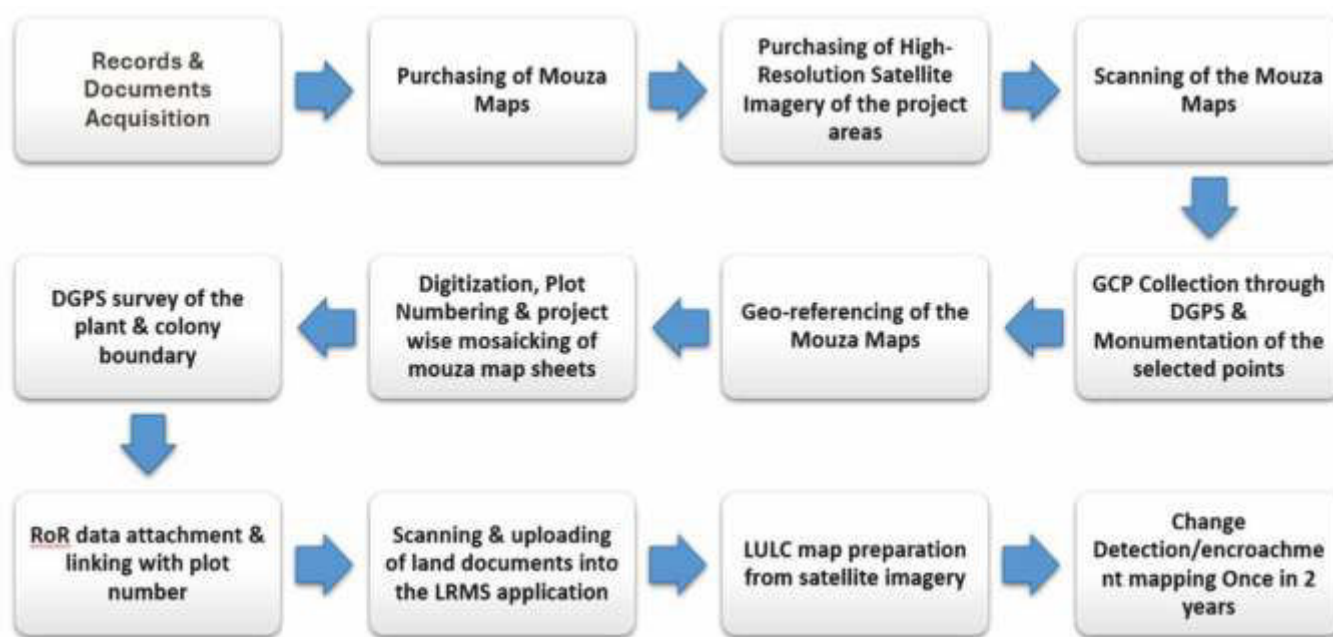
3. Details of the Digitization of Land Record Management Project:

I. Description and Context

DVC, established in 1948, is India's first multipurpose river valley project and operates in Jharkhand and West Bengal. As part of its infrastructure, DVC has acquired over one lakh acres of land for its dams, reservoirs, power projects, canals, and townships. Digital Land Record Management (LRM) was deemed imperative by DVC to accurately and effectively track and check out its entire land estate.

II. Methodology and Implementation

DVC designed a Strategic Map to develop a fully digitized Land Record Management Portal, which functions as both a single, robust document repository and a powerful monitoring tool. The project is intended to cover the digitization, geo-referencing, and Geographic Information System (GIS) integration of approximately 1,00,000 acres of DVC land.



Flow Chart of the project

Pic 2: Methodology of Survey & GIS Mapping

The implementation involves the following key steps, executed in a phased manner:

A. Records Collection and Verification

- **Collection of Records:** This phase involves collating Land Acquisition (LA) records from all DVC offices.
- **Procurement and Certification:** Missing documents from district land revenue offices are procured. Documents such as gazette notifications, award statements, possession certificates, and schedules are certified.

B. Digitization and Geo-Referencing (Precision Digitization)

- **Map Digitization:** Cadastral (mouza) maps are scanned and vectorized.
- **Superimposition:** Cadastral Survey (CS), Revisional Survey (RS), Land Reform (LR), and Land Acquisition (LA) maps are superimposed to ensure comprehensive coverage.
- **Accuracy:** DGPS instruments (Differential Global Positioning System) are used for geo-referencing and seamless mosaicking to ensure high accuracy.
- **Digital Layers:** Digital spatial layers for plots, boundaries, and mouzas are created.

C. Satellite Imagery and Land Use Mapping

- **Imagery Procurement:** Annual high-resolution satellite imagery is procured.
- **LULC Mapping:** Land Use/Land Cover (LULC) maps are prepared.
- **Field Verification:** Field verification is conducted to classify land into vacant, submerged, unsecured, and encroached zones.



D. GIS-Enabled Land Record Management System (LRMS)

- **System Development:** The LRMS is deployed as a cloud-hosted web-based GIS application.
- **Features:** The system includes map-based queries, spatial analysis, and the capability to detect land changes, supported by role-based authentication. It is hosted on MeitY-empanelled cloud servers

Precision Digitization and Geo-Referencing

Map Digitization



- Mouza maps and LA case maps will be scanned, digitized, vectorized, and updated.
- Cadastral Survey (CS) and Revisional Settlement (RS)/Land Revisional (LR) maps will be digitized and superimposed for comprehensive coverage.

Geo-Referencing Accuracy



- Plot and Mouza boundaries will be digitized, with advanced provisions for real-time change detection, critical for managing land dynamics.
- Geo-referencing and seamless mosaicking will be meticulously carried out using DGPS instruments to ensure high accuracy.

Pic 3: Implementation Process: Precision Digitization and Geo-referencing

4. Impacts and Benefits

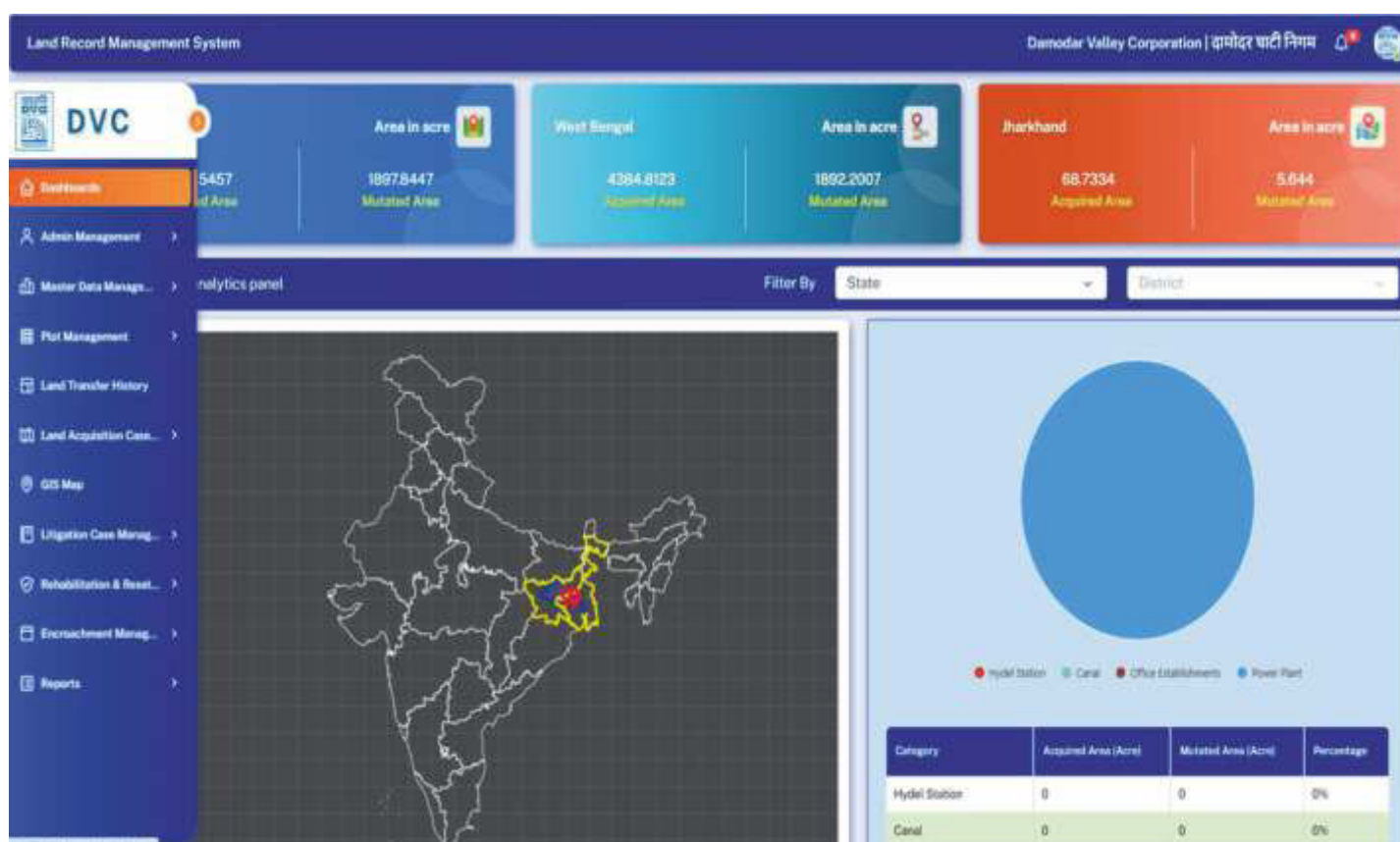
The LRMS provides strong support for preventive vigilance, particularly in mitigating disputes and improving institutional transparency.

- **Digital Repository and Data Accumulation:** It creates a single, authenticated, and searchable land database. All land records are brought under a single umbrella, accumulating legacy data, including all litigations against each plot number.
- **Enhanced Transparency:** Reduces disputes through quick access to authenticated records.
- **Operational Efficiency:** Decisions regarding planning, compensation, and rehabilitation are expedited.

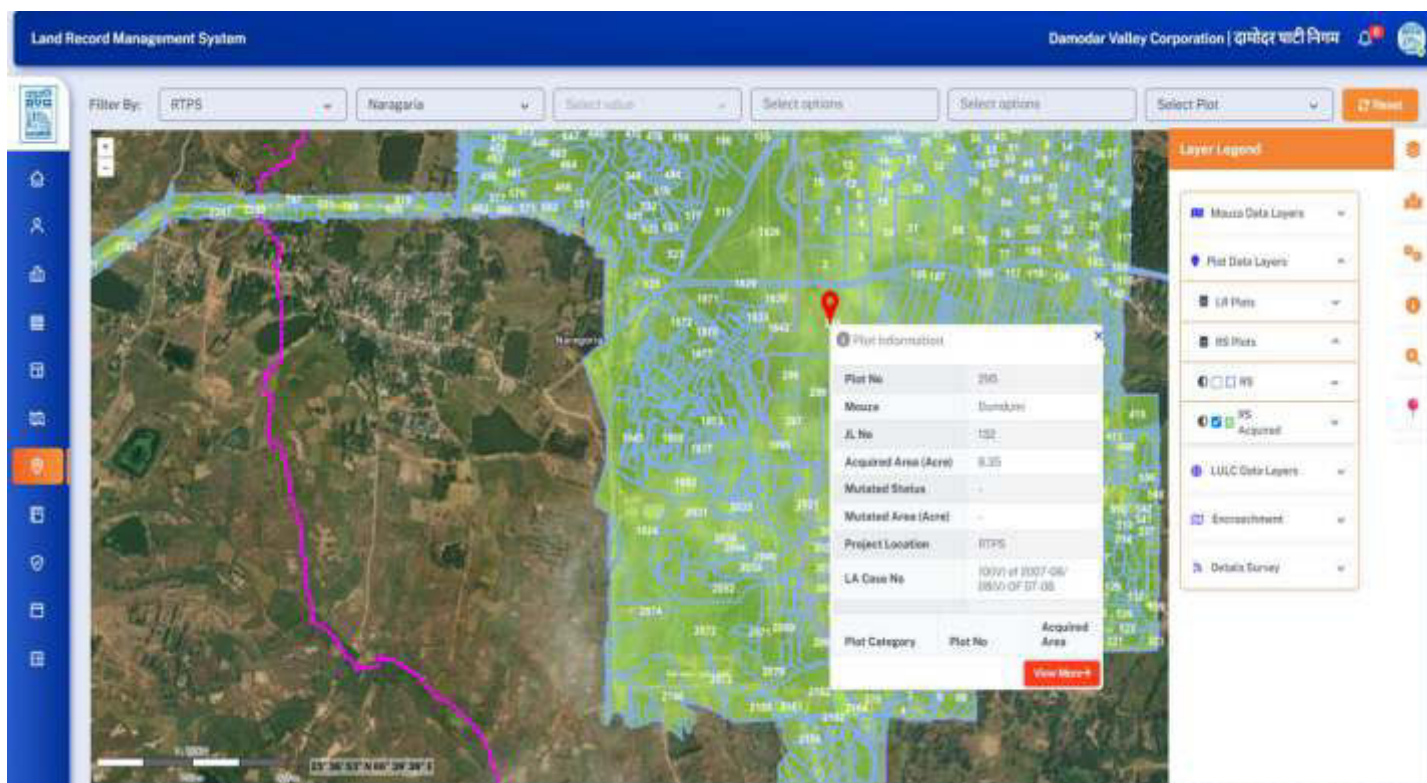
- Improved Flood and Land Governance: The system enables improved management of submergence and embankments, thus bolstering Flood Governance. This also allows for the modelling of flood-prone zone prediction.
- Encroachment Detection and Accountability: It facilitates the scope of detection of encroachment. It ensures stronger accountability and responsibility.
- Litigation Support: The system offers stronger legal defenses against litigation by using geo-referenced evidence, reinforcing trust among governments, courts, and communities.

☞ Glimpses into DVC's Land Record Management Portal

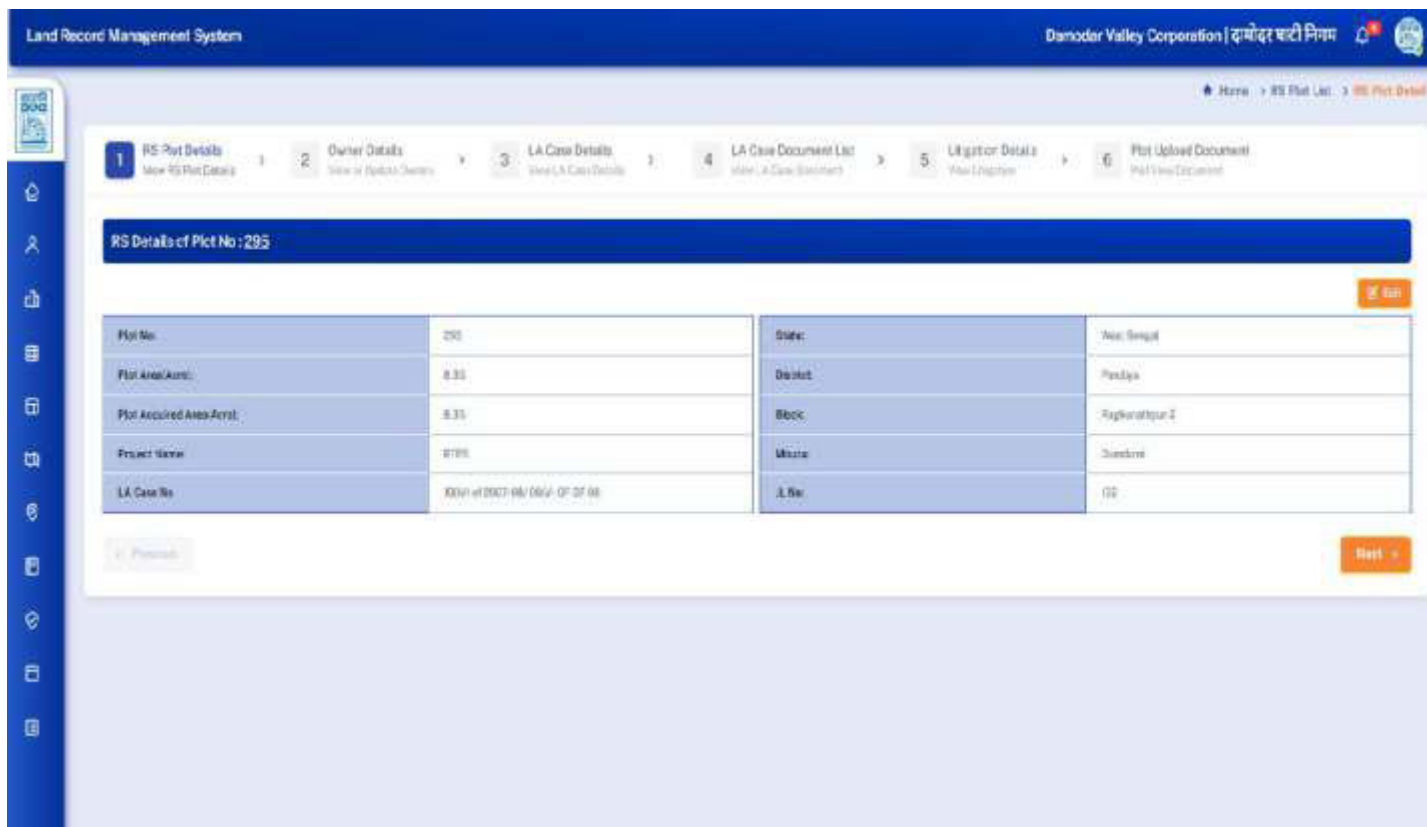
DVC has been able to design a Land Record Management System Portal, where the consolidated maps of all DVC Land Areas are available, alongside the respective LA status, pending cases, LULC etc.



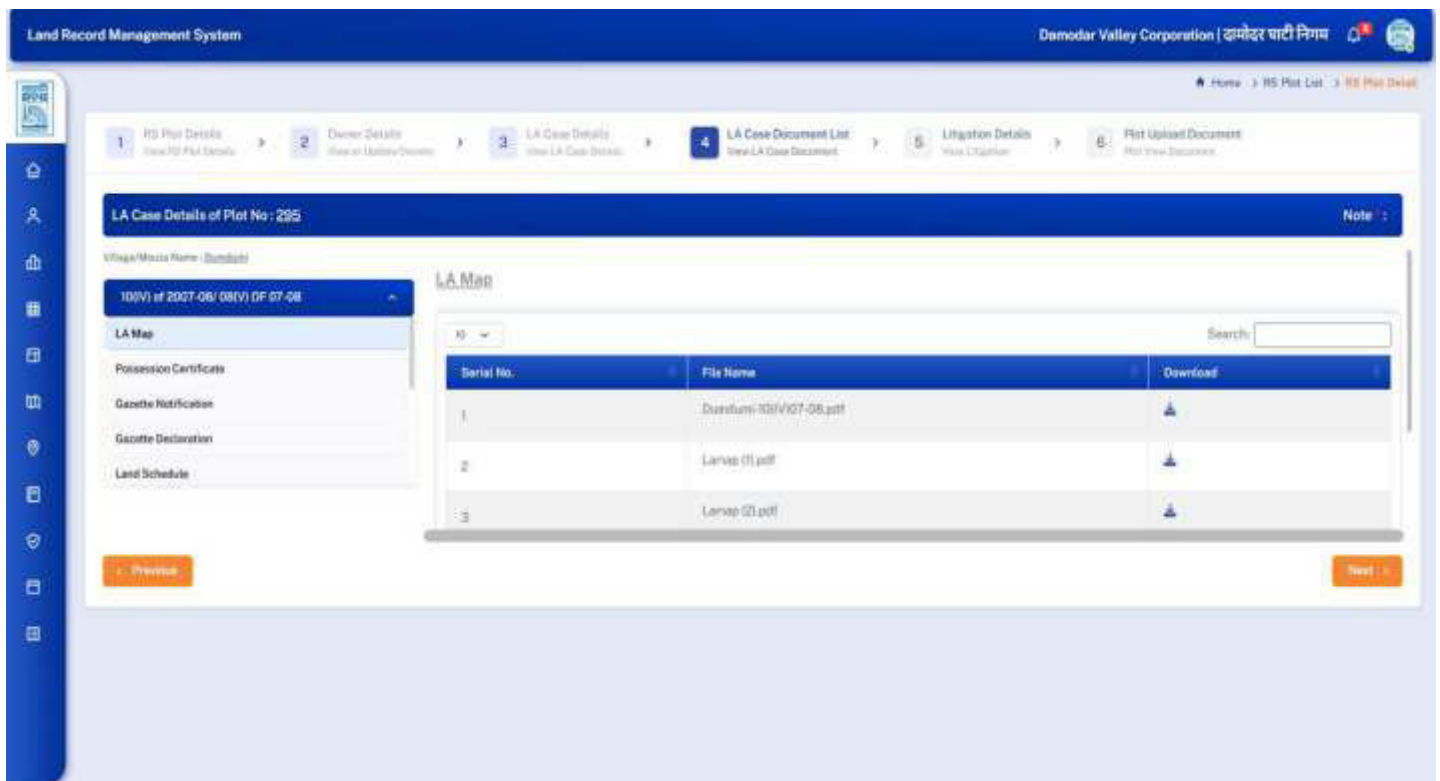
Pic 4: Land Record Management System Portal of DVC



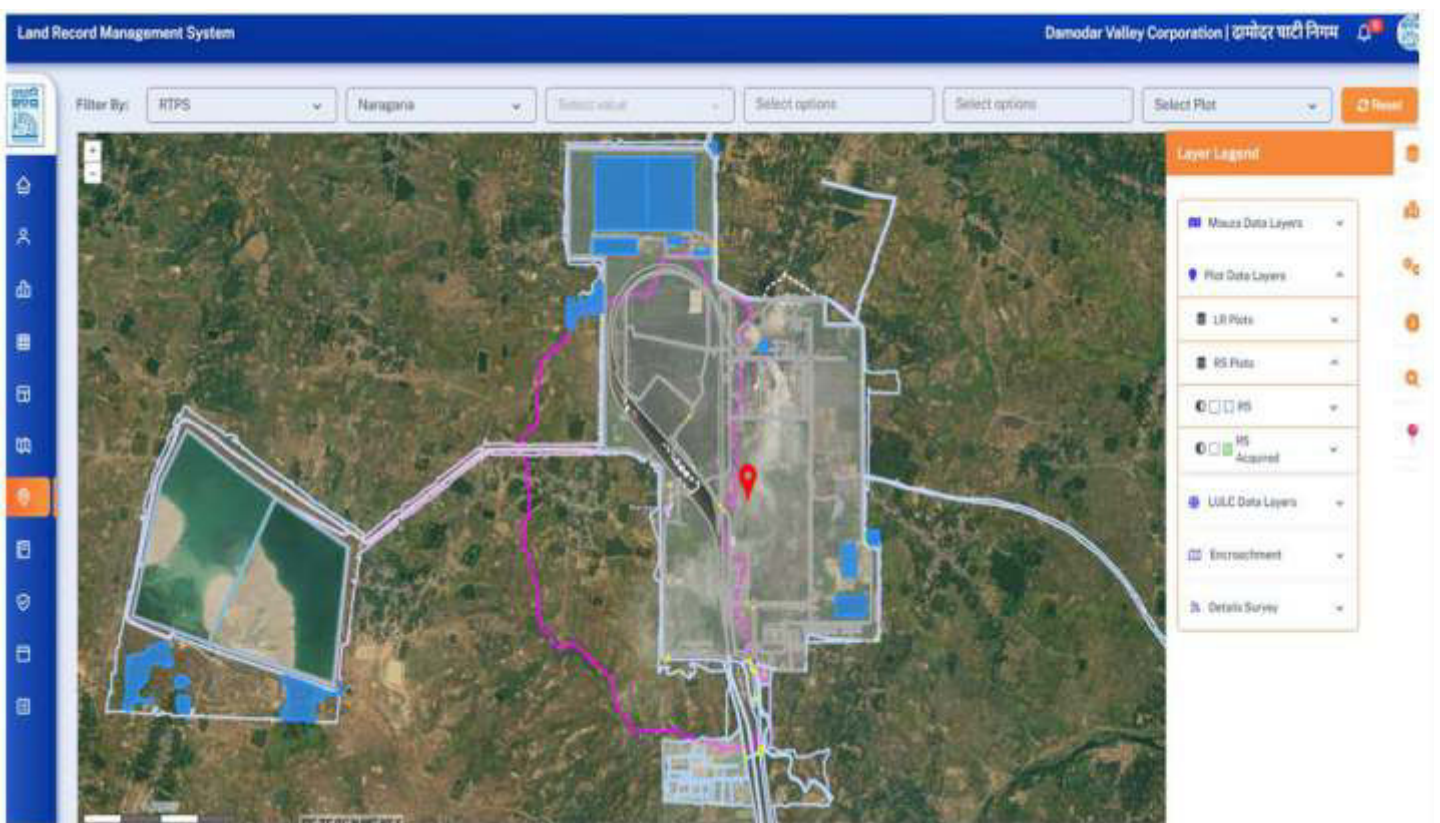
Pic 5: Overview of geo-referenced Map of RTPS, DVC on the Land Record Management System Portal of DVC, with selection of a specific plot, which displays the basic plot information



Pic 6: Detailed Plot Information of the above plot



Pic 7: LA Case Details of the above plot



Pic 8: Geo-referenced image of RTPS with delineated Acquired RS Plots in blue



5. Potential for Replicability

The methodology developed by DVC is viewed as a scalable approach that holds strong potential for replication by other organizations facing similar land management issues.

The LRMS initiative demonstrates that with phased implementation, institutional support, and stakeholder engagement, digital land governance systems can transform development trajectories.

The system can be adapted and replicated by other sectors and organizations, including:

- **Organizations with Encroachment Issues:** Organizations or institutions grappling with encroachments and land disputes can benefit from geo-referenced land records.
- **River Basin Authorities:** Other river basins facing flood challenges could adopt similar models.
- **Mining and Industrial Zones:** Transparent land allocation and monitoring systems can reduce conflicts and enhance compliance.



Check Dam and Soil Conservation using Remote Sensing and Geo-spatial Analysis

“Transforming the Damodar Valley responsibly”.

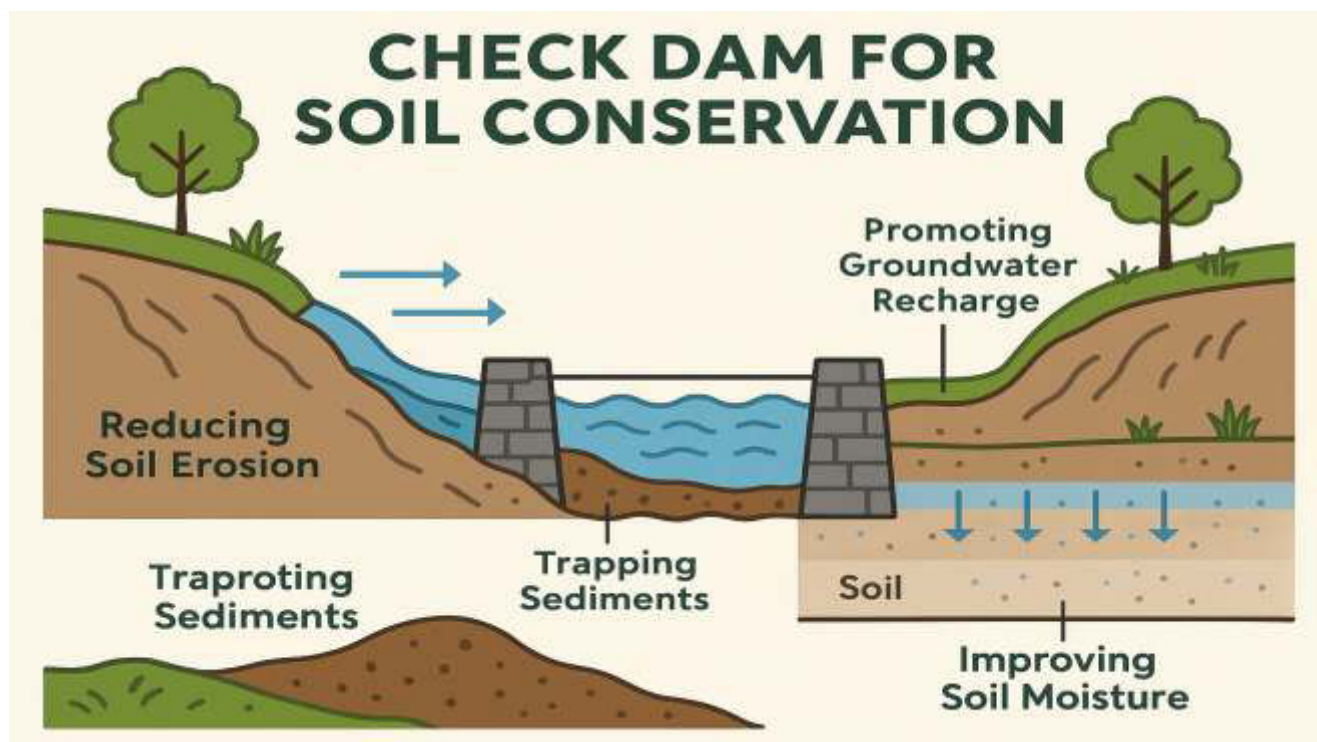
1. A brief on Geo-spatial Analysis for Check Dam and Soil Conservation by DVC

Soil conservation and water management are critical challenges in the operational areas of DVC, particularly in the plateau and semi-arid regions of West Bengal and Jharkhand, where erratic rainfall and fragile soils cause high erosion and low agricultural productivity. Flood control, soil conservation, and water resource management are among the core mandates of DVC.

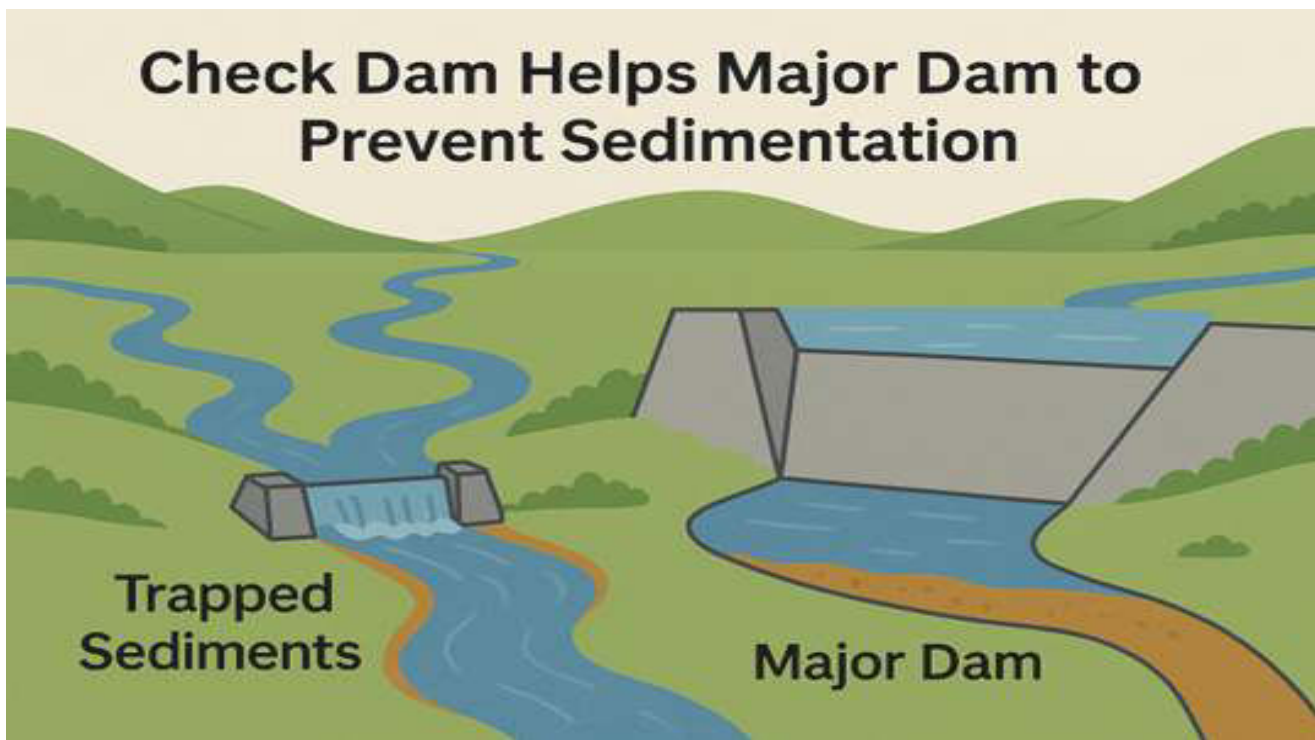
Check dams are a crucial initiative to achieve these objectives. They are simple structures that obstruct the natural flow of water across small streams and gullies, thereby reducing runoff velocity, facilitating sediment deposition, and enhancing groundwater recharge.

The utility of check dams includes:

- **Soil Conservation:** They trap nutrient-rich sediments, preserving soil fertility.
- **Water Management:** They act as micro-reservoirs, storing water for livestock and irrigation, and ensuring long-term water availability through groundwater recharge.
- **Flood Mitigation:** They reduce flood intensity and stabilize stream banks during heavy rainfall.
- **Dam Lifespan Extension:** By trapping sediments in upstream areas, they help DVC minimize adverse sediment accumulation on the reserve capacity of main dams, extending the lifespan of those dams.



Pic 1: Check Dam and its utility



Pic 2: Site of Check Dams are selected along smaller tributaries and streams

2. Challenge and Adoption of Geo-spatial Planning

DVC has approximately 20,000 check dams within its command area and is committed to adding more. However, the crucial issue was the site selection for new check dams, which was technically intricate and subject to vigilance angles.

Traditional methods of site selection had several limitations: they were time-consuming (requiring extensive field visits), subjective (relying on local judgment), and fragmented (focusing only on isolated parameters). This subjectivity could lead to the misuse of discretionary power by surveyors, potentially resulting in favouritism, bribery, or benefiting socio-politically influential people.

To overcome these issues, DVC adopted a geo-spatial planning approach:

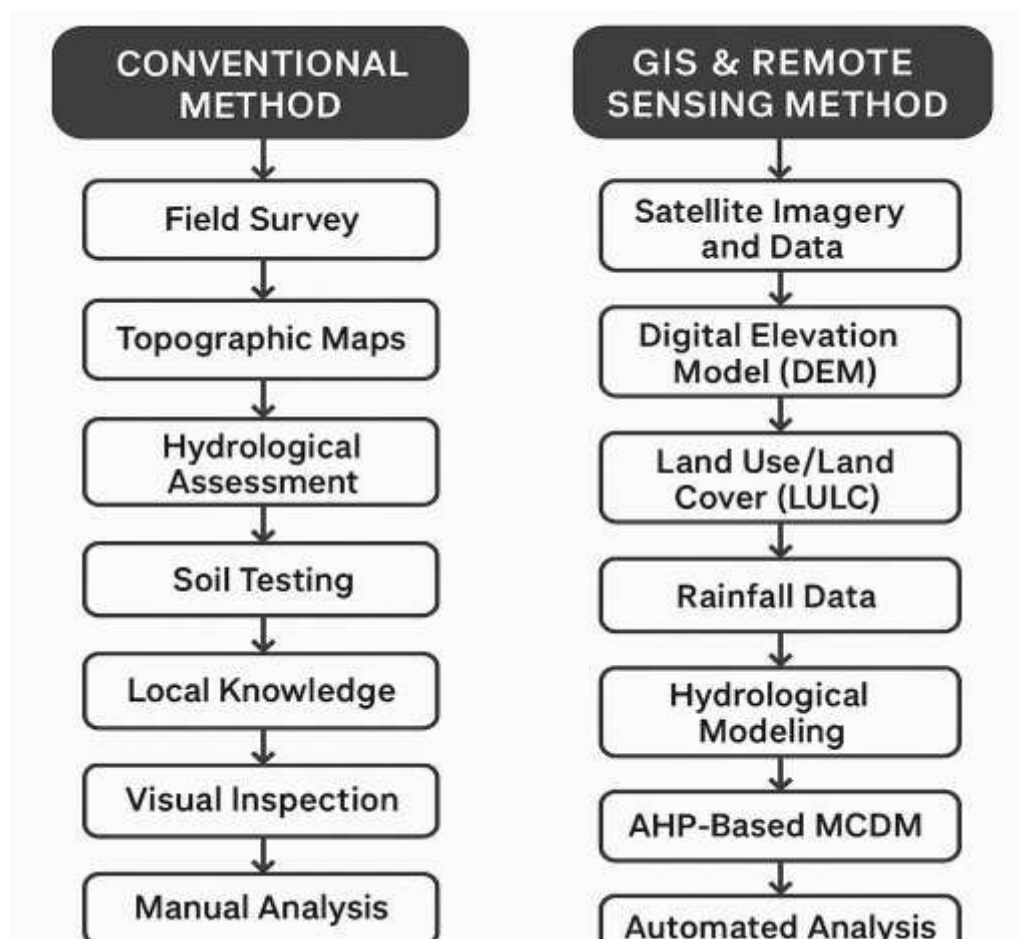
- This approach integrates Remote Sensing (RS), Geographic Information System (GIS), and Analytical Hierarchy Process (AHP) to deliver scientifically robust, transparent, and replicable outcomes.
- The results are completely data-driven and independent of human discretion.
- GIS and RS tools provide wide-area coverage, including inaccessible regions, and enable multi-criteria decision-making by integrating factors like slope, soil, rainfall, geology, and vegetation.

Challenges Related to Traditional Site Selection Methods

Traditional methods for site selection were inefficient, time-consuming, and lacked scientific rigor:

- **Time-Consuming:** Traditional methods required extensive field visits, making the process lengthy.

- **Subjective:** Site selection relied heavily on local judgment, introducing subjectivity into the decision-making process.
- **Fragmented Analysis:** These methods were often fragmented, focusing only on isolated parameters rather than an integrated, multi-criteria approach (like slope, soil, rainfall, etc.).
- **Risk of Project Failure:** Beyond site selection, factor such as inadequate project oversight, was existing risks that could lead to project failure and a wastage of resources.

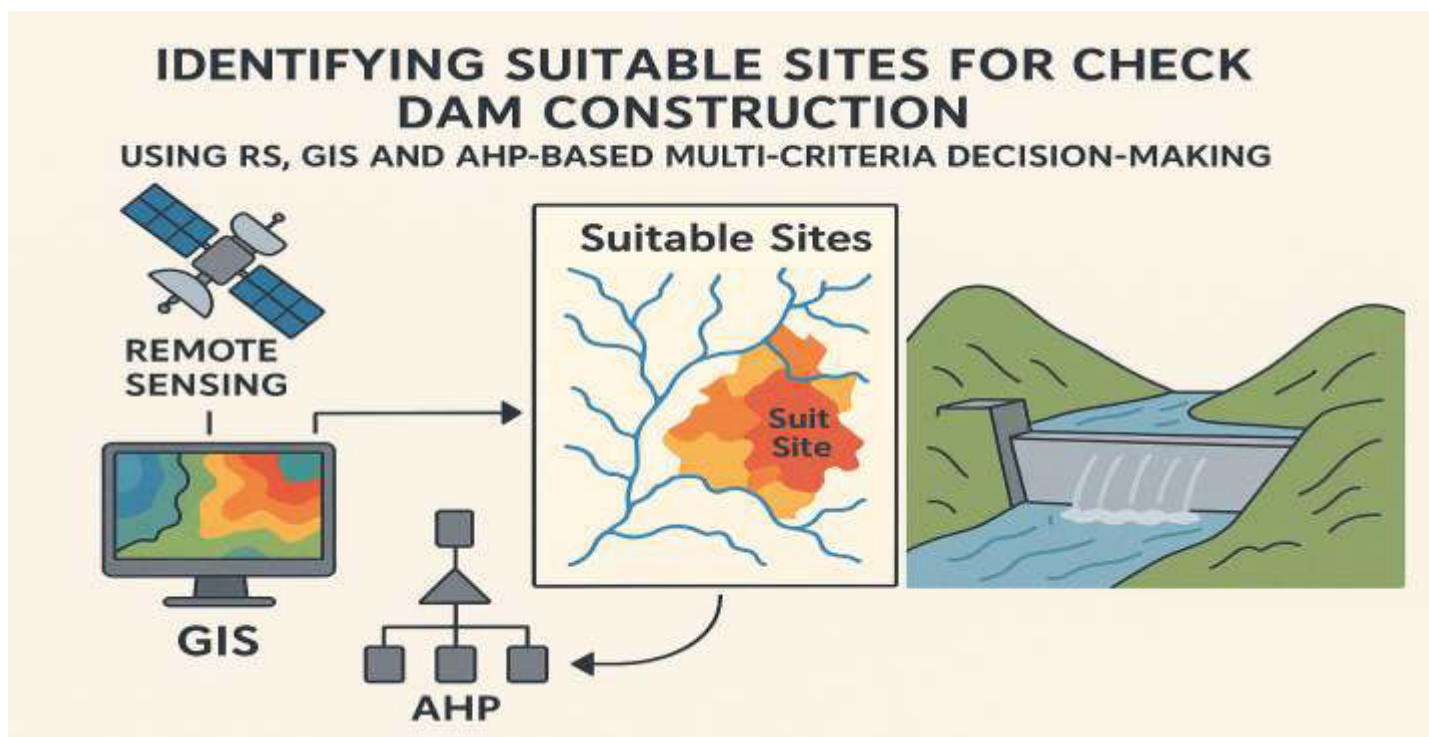


Pic 3: Comparison- Conventional Method vs. GIS & RS method as a decision-making tool for suitability of area for Check-dam construction

DVC adopted the geo-spatial planning approach (integrating Remote Sensing, GIS, and AHP) specifically to overcome these technical limitations and to deliver scientifically robust, transparent, and replicable outcomes that are independent of human discretion.

3. Details of Geo-spatial Analysis for Check Dam and Soil Conservation

Damodar Valley Corporation (DVC) adopted Geo-spatial Analysis for Check Dam construction and Soil Conservation by integrating Remote Sensing (RS), Geographic Information System (GIS), and the Analytical Hierarchy Process (AHP). This approach was implemented to move beyond traditional, subjective, and time-consuming manual site selection methods, ensuring scientifically robust, transparent, and replicable outcomes that are purely data-driven.



Pic 4: Usage of RS, GIS and AHP for determining suitable sites for check dams.

Geo-spatial Implementation Methodology (Bokaro Pilot Project Study)

DVC piloted this structured methodology in Bokaro District, Jharkhand. Bokaro was selected due to its humid subtropical climate, erratic rainfall, and highly erodible soils.

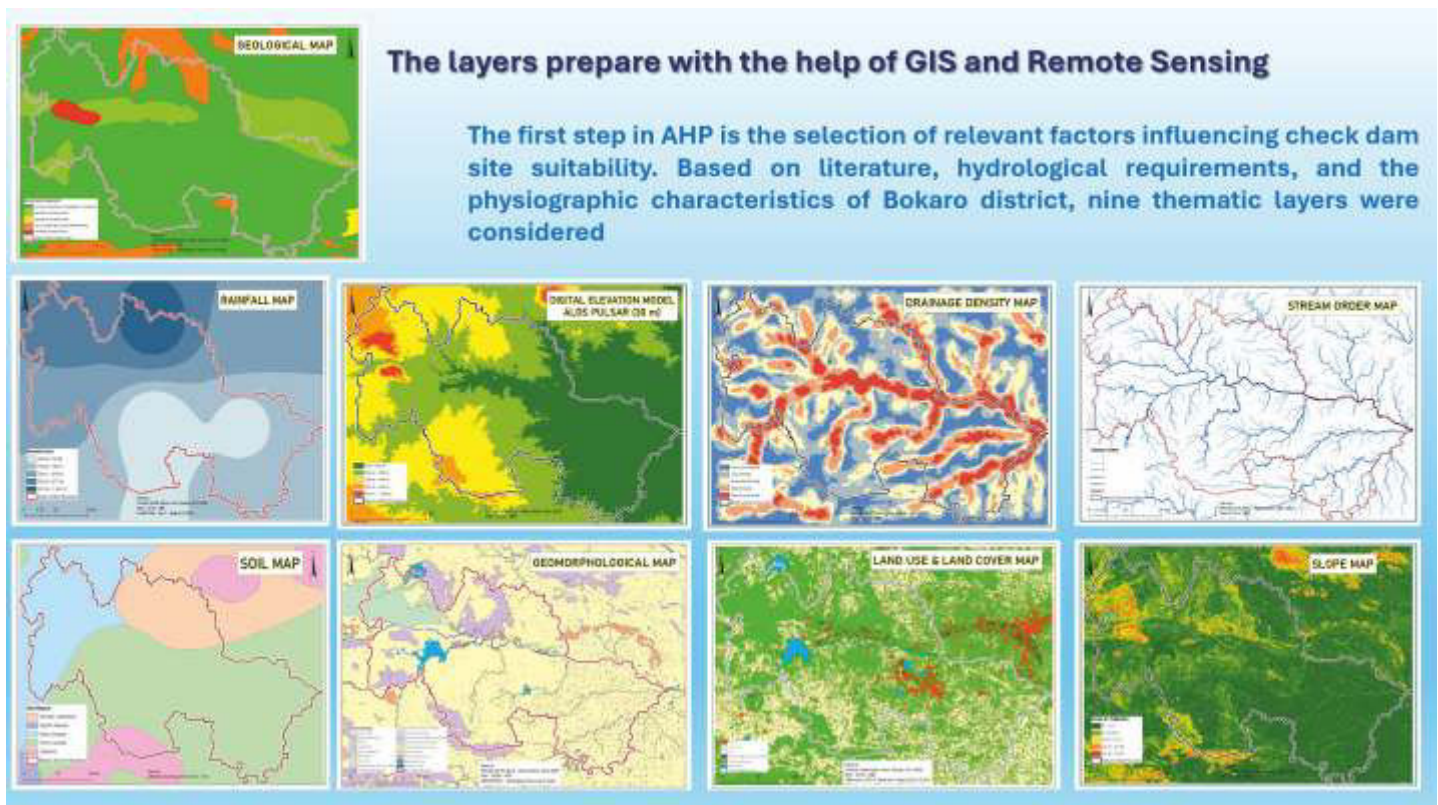
The methodology involved the following steps:

I. Preparation of Thematic Layers

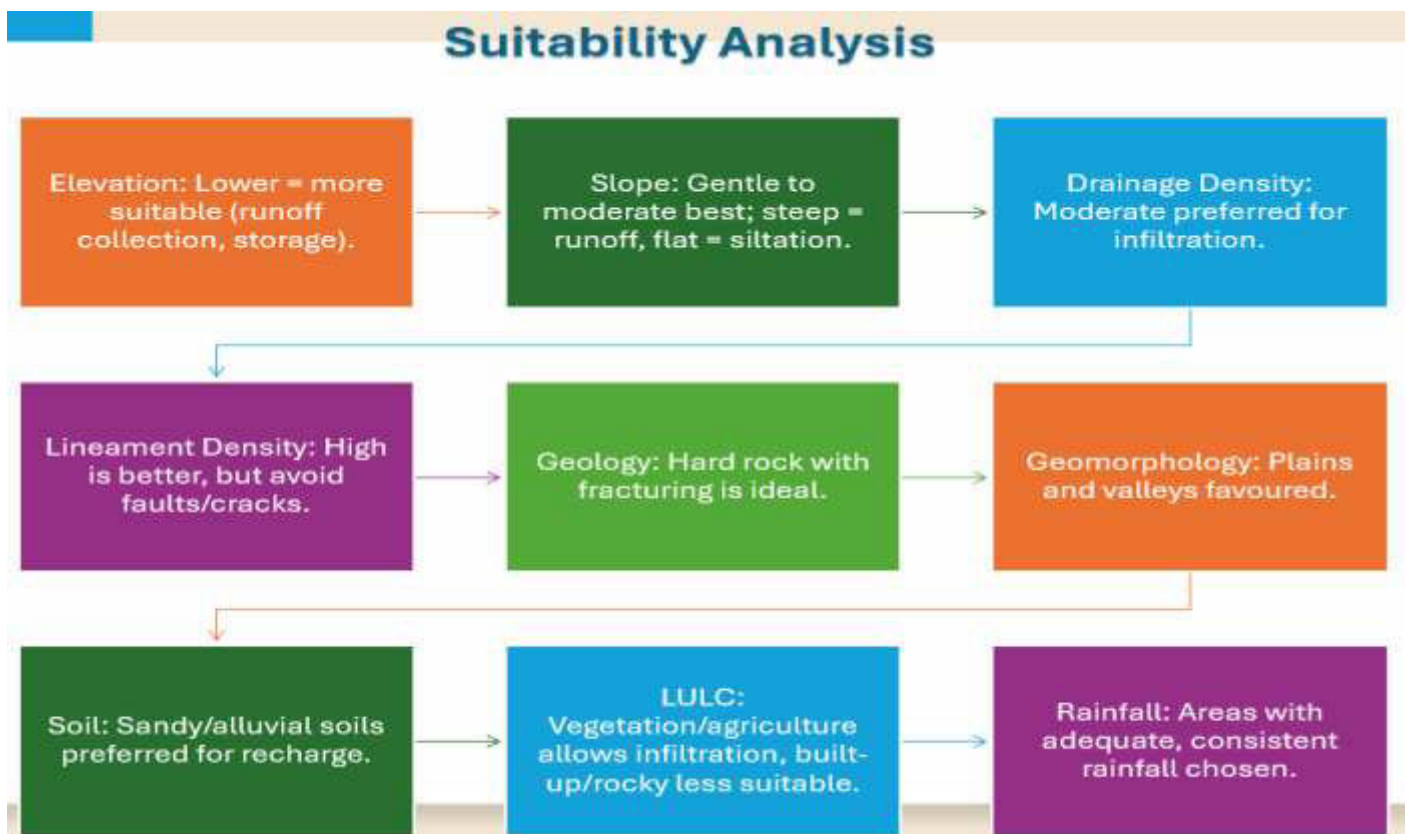
Nine thematic layers were prepared using GIS and Remote Sensing tools. These factors influence water flow, infiltration, and soil retention, thereby impacting suitability for construction.

The layers prepared were:

- Slope
- Elevation
- Soil type
- Rainfall distribution
- Land use/land cover (LULC)
- Geology
- Stream order
- Drainage density
- Geomorphology



Pic 5: Different Thematic layers.



Pic 6: Suitability Analysis



II. Weight Assignment using Analytical Hierarchy Process (AHP)

Each parameter was assigned a relative weight based on its significance. For example, parameters like slope and soil type received higher weights due to their direct impact on infiltration and runoff. AHP ensured decisions were systematic and balanced, preventing over-reliance on a single factor.

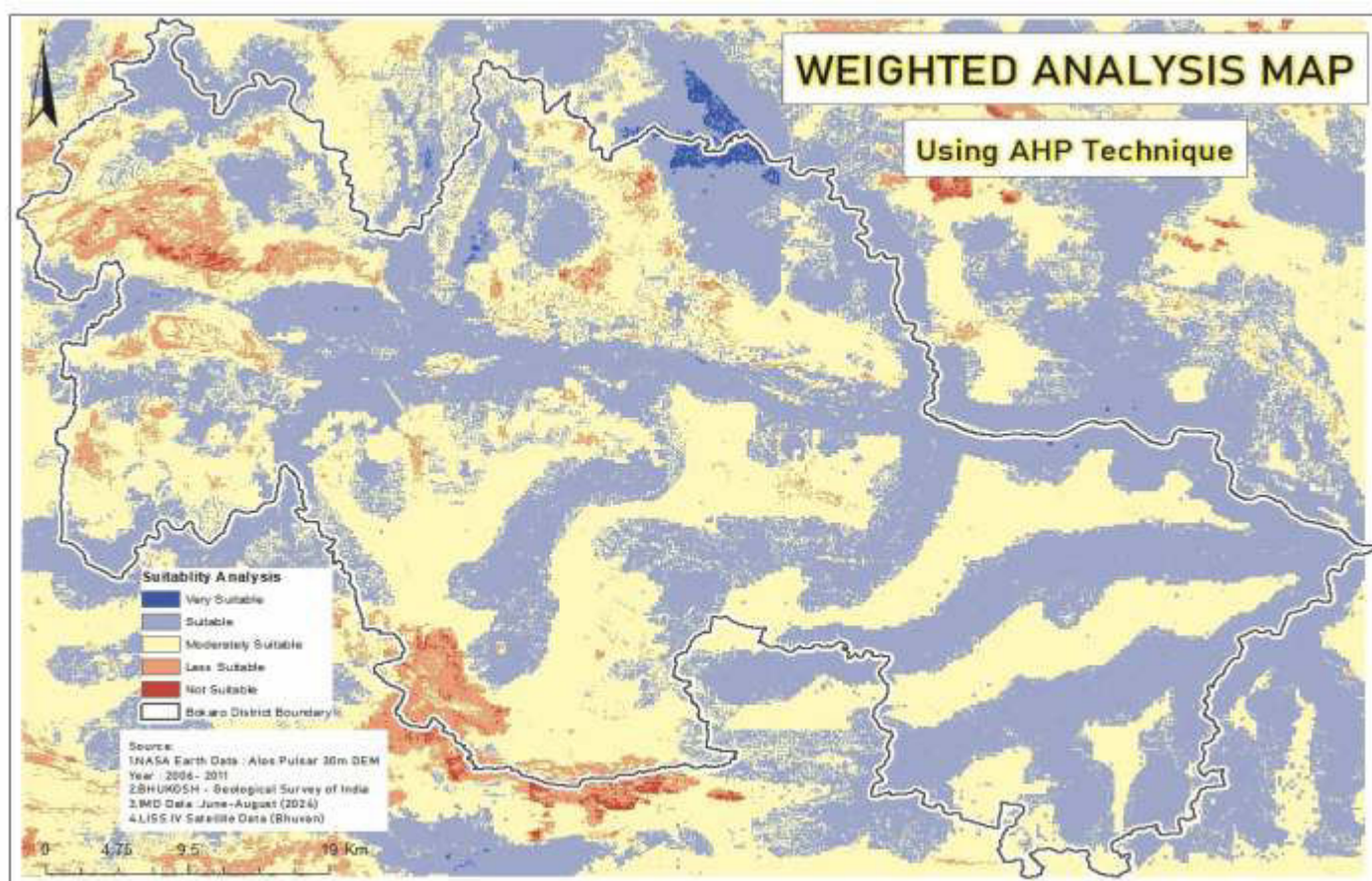
III. Weighted Overlay Analysis in GIS

All thematic layers were integrated using a weighted overlay model in GIS to generate a composite suitability index across the district.

IV. Classification of Suitability Zones

The composite suitability index was classified into five categories to identify optimal construction areas:

- **Very Suitable (Blue):** Areas with moderate slopes and perennial streams, concentrated in central and northern regions.
- **Suitable (Light Blue):** Widespread areas characterized by permeable soils and recharge potential.
- **Moderately Suitable (Yellow):** Areas with mixed conditions of runoff and infiltration.
- **Less Suitable (Orange):** Found in hilly terrains with high runoff and rocky formations.
- **Not Suitable (Red):** Steep uplands where lithology prevents effective water storage.



Pic 7: Classification of Suitability Zones on the Weighted Analysis Map

V. Field Validation

Sites identified through the rigorous GIS analysis were cross-verified via field surveys to ensure the scientific model was grounded in practical feasibility.

4. Benefits of Geo-spatial Analysis for Check Dam and Soil Conservation

The Geo-spatial Analysis adopted by Damodar Valley Corporation (DVC) for Check Dam construction and Soil Conservation has yielded comprehensive benefits across environmental, agricultural & economic domains. This approach, which integrates Remote Sensing (RS), Geographic Information System (GIS), and Analytical Hierarchy Process (AHP), ensures outcomes that are scientifically robust, transparent, and independent of human discretion.

These are as below :

I. Transparency, Accountability, and Institutional Credibility

The shift from subjective manual surveys to data-driven geo-spatial analysis fundamentally improved governance:

- **Minimization of Corruption Risk:** The use of RS and GIS ensures fairness, transparency, and accountability, and subsequently minimizing the risk of corruption, misuse of funds, and non-performing assets.
- **Reduced Favouritism:** The system strips the discretionary power from a limited number of people, thereby helping to reduce the chances of voluntary or involuntary favouritism, victimisation, and bribery.
- **Enhanced Trust:** The transparency strengthens trust in governance and enhances the long-term sustainability and impact of water resource projects.

II. Environmental and Water Resource Benefits

The check dam structures and the scientific site selection process provide multiple long-term environmental advantages:

- **Soil Conservation:** The structures lead to reduced erosion and the preservation of nutrient-rich topsoil.
- **Water Resource Sustainability:** The dams facilitate enhanced groundwater recharge and reduce the dependence on declining aquifers. They act as micro-reservoirs, storing water for long-term availability.
- **Flood Mitigation:** Check dams reduce the velocity of stormwater, which helps in mitigating flash floods.
- **Habitat Creation:** The creation of new wetlands and micro-reservoirs fosters new microhabitats for flora and fauna.
- **Extension of Main Dam Lifespan:** By trapping sediments in upstream areas, check dams help DVC in minimizing the adverse impact of sediment accumulation on the reserve capacity of the main dams, subsequently extending the lifespan of the main dams.



III. Agricultural and Socio-Economic Benefits

The benefits directly improve agricultural output and community resilience:

- **Increased Crop Yields:** Enhanced soil fertility and moisture retention directly improve productivity.
- **Extended Cropping Seasons:** Stored and recharged water enables farmers to cultivate beyond the monsoon season.
- **Reduced Risk of Crop Failure:** Stabilized water availability cushions farmers against the impact of erratic rainfall.
- **Water Security:** Improved availability of water for drinking, livestock, and irrigation enhances water security.
- **Community Resilience:** The reduced vulnerability to floods and droughts enhances community resilience.
- **Inclusive Development:** Benefits accrue not just to farmers but also to downstream communities, industries, and ecosystems.

IV. Economic and Operational Benefits

The implementation of the geo-spatial methodology also resulted in operational improvements:

- **Cost Efficiency:** The use of GIS and RS saves time and resources in planning compared to traditional methods.
- **Employment Generation:** The construction and maintenance activities associated with the check dams create local jobs.
- **Support for Industry:** By stabilizing water resources, check dams indirectly sustain industrial activities, especially in water-stressed regions like Bokaro.

5. Replicability

I. Technical and Methodological Expansion

The methodology is inherently flexible and scalable, which facilitates its adoption by other institutions:

- **Standardization and Adaptability:** The methodology is standardized, relying on readily available satellite data and GIS tools. Crucially, the Analytical Hierarchy Process (AHP) framework ensures flexibility because the weights of the parameters can be adjusted depending on local conditions.
- **Strengthened Credibility:** Field validation of the scientific model strengthens its credibility, making it adaptable to diverse geographies.

II. Institutional and Policy Integration

The geo-spatial methodology is designed for broader integration into governmental and developmental frameworks:

- **Integration into Watershed Programs:** Government agencies can integrate this methodology

into watershed development programs.

- **Alignment with Global Goals:** The practice aligns with Sustainable Development Goals (SDGs) related to water management, land conservation, and climate action.
- **Community Ownership:** Future success is linked to fostering partnerships with local communities to ensure project ownership and long-term maintenance.



“ No matter what is the environment around you, it is always possible to maintain your brand of integrity ”

Dr A P J Abdul Kalam









North Eastern Electric Power Corporation Limited

Implementation of ERP in NEEPCO

1. A brief on implementation of ERP in NEEPCO

The North Eastern Electric Power Corporation Limited (NEEPCO) undertook a significant technological initiative through the Implementation of ERP (Enterprise Resource Planning) across all its locations. This system was introduced as a key measure for integrating previously isolated data and systems into a single, unified platform, aiming to improve information accuracy and process uniformity throughout the organization.

The ERP implementation in NEEPCO is recognized as a major initiative contributing to preventive vigilance by promoting standardization, efficiency, and real-time data access.

2. Challenges before implementation of ERP in NEEPCO

The implementation of the Enterprise Resource Planning (ERP) system in NEEPCO was necessary to overcome challenges arising from previously isolated data and systems, which impacted information accuracy and process uniformity across all locations.

3. Details of implementation of ERP in NEEPCO

The implementation of Enterprise Resource Planning (ERP) in North Eastern Electric Power Corporation Limited (NEEPCO) was a significant, multi-phased initiative to integrate previously isolated data and systems into a single, unified platform across all its locations. This effort was crucial for enhancing information accuracy and process uniformity. The system successfully achieved the SAP Enterprise Go-Live, marking a transformative step toward automation, digital integration, and operational efficiency.

The ERP is identified as a key component of preventive vigilance as it introduces transparency, efficiency, and accountability, particularly within the vendor payment cycle.

I. ERP Objectives (Background)

NEEPCO adopted the ERP application to address core organizational challenges and achieve specific objectives:

- Integration: To integrate different organizational functions for improved communication, coordination, and collaboration.
- Standardization: To standardize business processes, thereby ensuring all employees follow the same guidelines and eliminating inconsistencies/variations in procedures.



- **Centralized Data:** To create a centralized database that stores all the organization's data, ensuring real-time access to accurate data necessary for informed decision-making.
- **Cost Reduction:** To minimize costs by eliminating redundant processes, reducing waste, and optimizing inventory levels.
- **Management Control:** To identify areas of inefficiency, enabling corrective actions and enhanced decision-making through information and business analytics.

II. Implementation Methodology

The ERP project was executed through several defined phases:

- (i) **Phase 1:** Project Preparation/Inception.
- (ii) **Phase 2:** Business Blueprint.
- (iii) **Phase 3:** Realization.
- (iv) **Phase 4:** Final Preparation/Transition.
- (v) **Phase 5:** Pilot Phase Go Live.
- (vi) **Phase 6:** Last Site Go Live.
- (vii) **Phase 7:** Post Last Site Go Live Stabilization Period (6 months).
- (viii) **Phase 8:** Annual Functional Support (AFS) for 3 years.

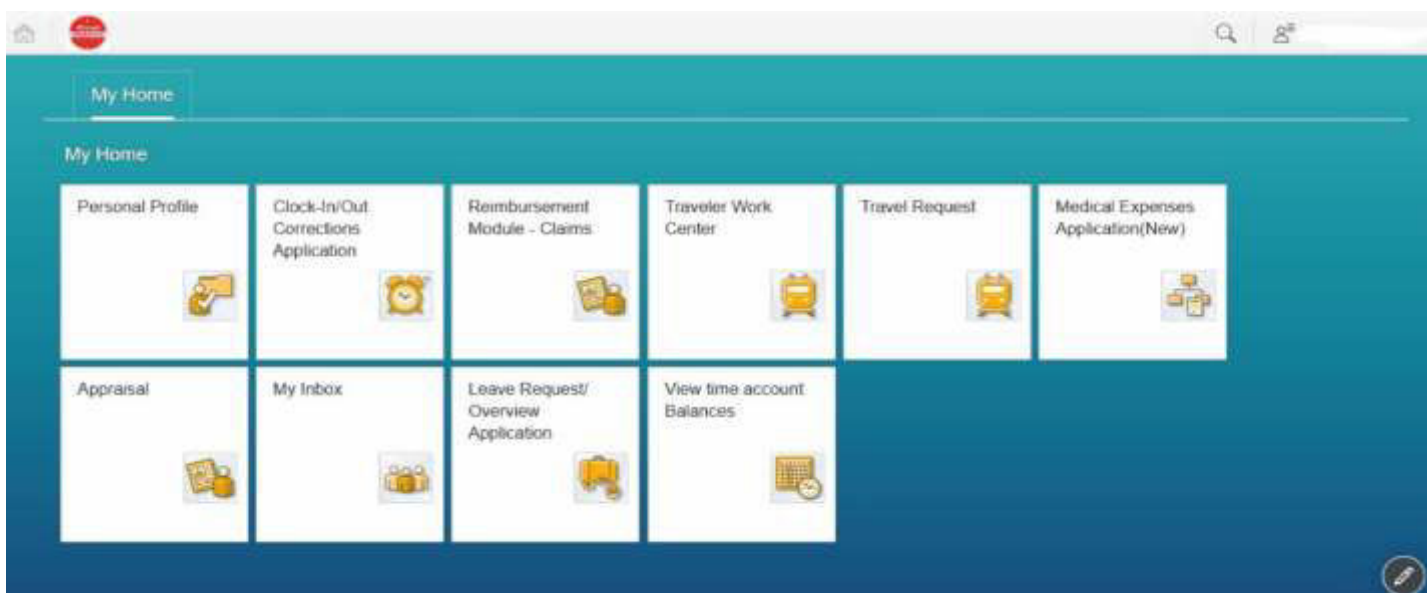
The project is currently in the Annual Functional Support (AFS) phase.

III. Implemented Modules

The NEEPCO ERP system includes the following core modules designed for comprehensive business management:

Module Name	Core Functionality
Finance Module (FICO)	Enables generation of financial statements (P&L, Balance Sheets). Supports GST and income tax reporting, asset accounting based on CERC regulations, and treasury & risk management. Includes custom reports (trial balance, bank day books, vendor advances, cost reports).
Human Resource (HCM) Module	Covers organization management (units, positions, jobs), personnel administration (employee data), manpower reports, and payroll administration (wage structures, PF, taxes).
Employee Self-Service (ESS/MSS)	Provides self-service portals for Travel Management, Performance Management, Attendance Management System (AMS), medical reimbursements, and other related services.

Material Management (MM)	Includes the creation of Purchase Requisitions (PRs), Purchase Orders (POs), processing bills/invoices, vendor management, and inventory management (goods/service receipt, goods issue/return, store transfer).
Plant Maintenance (PM)	Implemented in all power plants, covering preventive, breakdown, corrective, condition-based, calibration, testing, and refurbishment maintenance processes. It is integrated with FICO, MM, Project System (PS), and Quality Management (QM) modules.
ISU - Operation/Commercial	The Operation Module supports generation forecasting, declaration, and monitoring. The Commercial Module handles billing and payments, customer service, and arrear reporting for power sales.
File Lifecycle Management (FLM) & Document Management System (DMS)	The FLM digitizes the entire file management process, workflow management, document uploads, and file-noting. The DMS enables digital document management, file storage, control, and revision, enhancing reliability.
Project System (PS)	Uses Work Breakdown Structures (WBS), networks, and activities to define projects with details like asset classes and profit centers. Purchase Requisitions (PRs) are generated under WBS elements.
Quality Management (QM)	Manages all quality-related functions, including planning and inspection of vendor goods and raw materials. It captures inspection results, tracks defects, and includes inspection records at vendor sites (GRN inspections for purchase orders).
Sales & Distribution (SD)	Manages all revenue generated from the sale of power, assets, and scrap.



Employee Self Service Portal



IV. Key Integrations and Supplementary Systems

The ERP system's core benefit is integration with internal and external platforms, enhancing transparency and efficiency as detailed below:

A. Bill Tracking System (BTS)

NEEPCO implemented the Bill Tracking System (BTS) to enhance transparency and efficiency, particularly in vendor invoice management.

- **Objective:** To ease the process for vendors and ensure timely payments by allowing them to track the submission and movement of their bills online.
- **Process Flow:** The vendor submits the invoice (physically or via mail). The Executing Wing enters the invoice into the BTS with reference to the Purchase Order. The invoice enters the system, a notification is sent to concerned vendors, and Finance verifies and processes the payment in ERP via the MIRO transaction. Once the payment is booked in ERP, the vendor is notified via their registered email.

B. Integration with Banking and Government Portals

- **Banking Systems:** The SAP system was successfully integrated with the SBI Payment Gateway. This enables secure, online, and error-free processing of payments and faster settlement of transactions.
- **Government e-Marketplace (GeM):** NEEPCO's SAP application has seamless integration through REST API services with the GeM portal, enabling the exchange of information and payment synchronization. This integration ensures end-to-end automated workflow from procurement to payment.

C. EMB System

The e-Measurement Book (EMB) system was developed and integrated with the SAP application for recording measurements of works, and its implementation is being phased across various locations.

4. Benefits of implementation of ERP in NEEPCO

The implementation of the Enterprise Resource Planning (ERP) system in NEEPCO has brought about vast improvements in efficiency, transparency, financial oversight, and long-term organizational excellence by integrating previously isolated data and systems into a single, unified platform.

The key benefits derived from the ERP implementation and its related integrated systems (like the Bill Tracking System) are:

I. Improved Information Accuracy and Standardization

- **Vastly Improved Information Accuracy:** Integrating previously isolated data and systems into a single, unified platform ensures a significant improvement in information accuracy across all locations.
- **Process Uniformity:** The ERP system promotes process uniformity across all locations. Standardizing business processes eliminates inconsistencies and variations in procedures, ensuring all employees follow the same guidelines.
- **Real-time Accurate Data:** It enables real-time access to accurate data, which is crucial for informed decision-making.

- **Centralized Database:** The system uses a centralized database that stores all the organization's data.

II. Enhanced Efficiency and Operational Excellence

- **Operational Efficiency:** The organization achieved a significant milestone with the successful setup of SAP Enterprise Go-Live, marking a transformative step towards automation and operational efficiency.
- **Streamlined Processes:** The ERP facilitates streamlined asset controls, enhanced project planning, and improved management of physical and financial oversight.
- **Cost Reduction:** The system helps reduce costs by eliminating redundant processes and minimizing waste.
- **Inventory Optimization:** It contributes to optimizing inventory levels.
- **Improved Management Control:** It enables management to identify areas of inefficiency and take corrective actions, leading to improved decision-making through information and business analytics.

III. Strengthening Preventive Vigilance and Transparency

The implementation of the ERP, especially through integrated systems, significantly strengthens NEEPCO's business processes by introducing transparency, efficiency, and accountability, particularly within the vendor payment cycle.

- **Vendor Transparency (Bill Tracking System - BTS):** The integration of the Bill Tracking System (BTS) with ERP allows vendors to track the submission and movement of their bills online, ensuring transparency and timely payments. The system is used for ensuring transparency and timely payments to vendors.
- **Accountability:** The Bill Tracking System enhances accountability in the vendor payment cycle.
- **Timely Payments:** Real-time tracking and automated notifications ensure that vendors are assured of timely payments, which helps generate trust and goodwill.
- **Secure Transactions:** The integration with banking systems (like the SBI Payment Gateway) enables secure, online, and error-free processing of payments, leading to faster settlement of transactions.
- **Improved Vendor Relations:** These improvements, including timely and transparent payment cycles, enhance trust and goodwill between NEEPCO and its vendors.

IV. Integration and Digital Flow

- **End-to-End Workflow:** Seamless integration of the ERP with portals like the Government e-Marketplace (GeM) facilitates automated workflow from procurement to payment, enabling the exchange of information and payment synchronization.
- **Holistic Improvement:** Overall, these technological advancements lead NEEPCO toward higher operational excellence, better stakeholder confidence, and long-term growth.

Way Forward:

A critical element of the ongoing implementation and its way forward is the complete integration and phase-wise rollout of supplementary systems, such as the e-Measurement Book (EMB) system. The EMB system, developed and integrated with the SAP application for recording measurements of works, is being implemented in a phase-wise manner in various locations.



OTHER GOOD PRACTICES IN NEEPCO

1. VIGILANCE COMPLAINT MANAGEMENT PORTAL IN NEEPCO

- Vigilance Complaint Management portal has been developed for logging complaints by users with the facility of tracking them with status updates.
- The online portal can be accessed by everyone by visiting neepco website i.e. neepco.co.in.
- Complainants have to register in the portal first with valid identity proof and address proof document.
- Complaints can be submitted by the complainant by filling up a web form with required details and supporting documents.
- Users receive a registration number after lodging the online complaint.
- After receiving the complaint in the portal, it is processed by the Vigilance department, NEEPCO as per CVC guidelines.
- The status of various stages of the processing of the complaint is updated in the portal by Vigilance wing, NEEPCO.
- The status of the complaint is sent to mobile number (via SMS) and e-mail id of the complainant for tracking.
- Vigilance complaint management portal has increased the transparency in complaint handling process of vigilance wing for its tracking facility.

2. ONLINE RECRUITMENT PORTAL IN NEEPCO

An online Recruitment portal is in use in NEEPCO to streamline the hiring process by making it faster, more cost effective and efficient for both employers and candidates.

The key advantages after introduction of Online recruitment Portal can be briefly summarized as under:

- **Time Saving:** Online recruitment Portal devised for Recruitment Wing in NEEPCO is automated for various stages of hiring, such as posting jobs, screening the Biodata and scheduling interviews, drastically reduces the time required to fill vacancies.
- **Cost Effective:** The recruitment eliminates expenditures related to traditional methods like bulk postings across platforms without extra cost.
- **Wider Reach:** Job postings on online portal are accessible at national level, allowing us to target and attract a larger and more diverse pool of candidates.
- **Enhanced Communication:** Centralized messaging in portals enables prompt communication with applicants, automated responses and bulk emails and Company branding.



THDC





Best Practices of THDCIL towards Preventive Vigilance

1. Online Vigilance Clearance System

Brief Description:

THDCIL's Online Vigilance Clearance System (GVCS) is a centralized digital platform designed to automate, monitor and manage vigilance clearances for employees across multiple official purposes. The system ensures transparent, timely, and compliant processing of requests through a structured workflow, thereby minimizing delays and enhancing organizational efficiency.

Implementation:

- **Purpose-Based Initiation** – Requests can be initiated either by the concerned department or the individual employee, depending on the clearance type (promotion, retirement, deputation, foreign visit, higher studies, passport/visa NOC, etc.).
- **Workflow Automation** – Pre-defined, configurable approval routes with role-based access ensure accountability, minimize bottlenecks, and provide real-time status visibility to stakeholders.
- **Central Repository** – The Disciplinary & Monitoring Cell (DMC) acts as custodian of vigilance and disciplinary records, maintaining all relevant documents digitally within the system.
- **Data Verification** – Corporate HR validates uploaded documents and details before forwarding the case to Vigilance for review. The CVO retains oversight, ensuring process integrity and compliance with guidelines.
- **Audit Trail** – Every clearance request is logged and time-stamped, ensuring transparency, accountability, and traceability for future audits or reviews

Impact & Benefits:

- Ensures faster vigilance clearance processing with reduced manual follow-ups.
- Improves transparency, traceability, and compliance with organizational policies.
- Centralizes vigilance data for easier verification and audit readiness

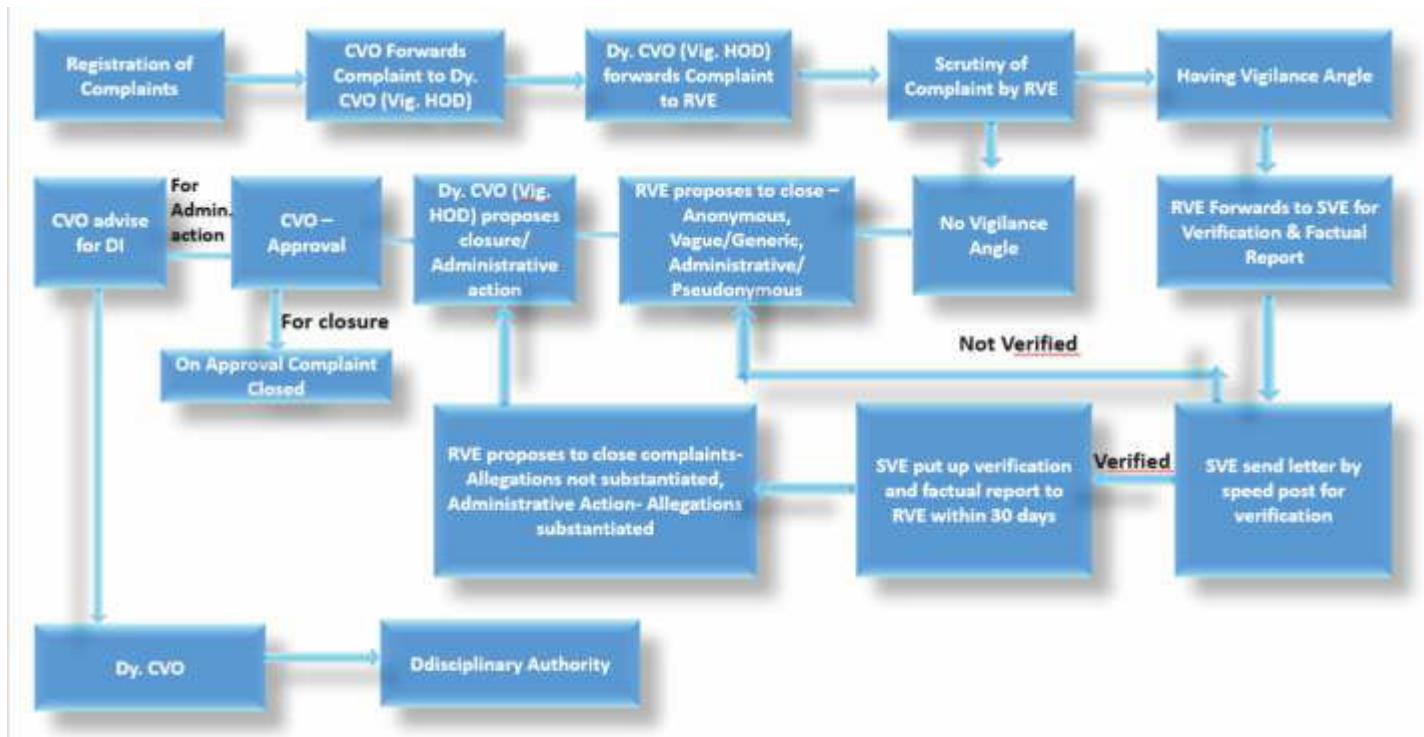
2. Vigilance Complaint Management System

Brief Description:

The Vigilance Complaint Handling System is an **in-house developed digital platform** designed to streamline the receipt, processing, and monitoring of vigilance-related complaints within THDCIL. Replacing manual, file-based workflows with an automated, transparent, and secure solution, the system ensures timely action, proper record-keeping, and enhanced accountability.



Process Flow/Workflow:



3. Grievance Tracking System (GTS)

Brief Description:

The **Grievance Tracking System (GTS)** is an online platform that enables both employees and the public to lodge grievances directly with THDCIL. Grievances like harassment, discrimination, injustice, abuse of power etc. excluding complaints related to vigilance are processed under grievance tracking system. Each grievance is reviewed by the Chief Grievance Redressal Officer (CGRO), verified, and appropriately categorized. The system provides a structured and transparent mechanism for grievance redressal while ensuring confidentiality of the complainant.

Potential for Replicability:

The GTS's user-friendly design, secure login, role-based access, and automated tracking make it easily adaptable for PSUs, government bodies, and large organizations to strengthen transparency, accountability, and timely grievance redressal.

4. Work Contract Module (e-MB)

Brief Description:

The Work Contract Module is an integrated digital solution introduced within the FMS application to manage the complete lifecycle of work contracts in THDCIL. The module digitizes critical processes such as contract creation, e-Measurement Book (MB), bill processing, and vendor payments.

Background:

Earlier, the measurement of works in THDCIL was recorded manually in physical Measurement Books (MBs), which was a time-consuming process often leading to delays, duplication, and lack of centralized data. Invoices, Bills of Quantities (BOQs), and supporting documents were also processed in physical form, making monitoring and retrieval cumbersome. To address these challenges, the Work Contract Module was developed within the FMS application to digitize the entire workflow.

With this module, measurements of work, invoices, BOQs, and bills are now maintained online, with soft copies seamlessly processed through the system. This not only enables faster processing of bills but also ensures greater transparency, structured data repository, and real-time monitoring. By shifting from manual MBs to a centralized digital platform, THDCIL has significantly improved efficiency, accountability, and financial control in contract management.

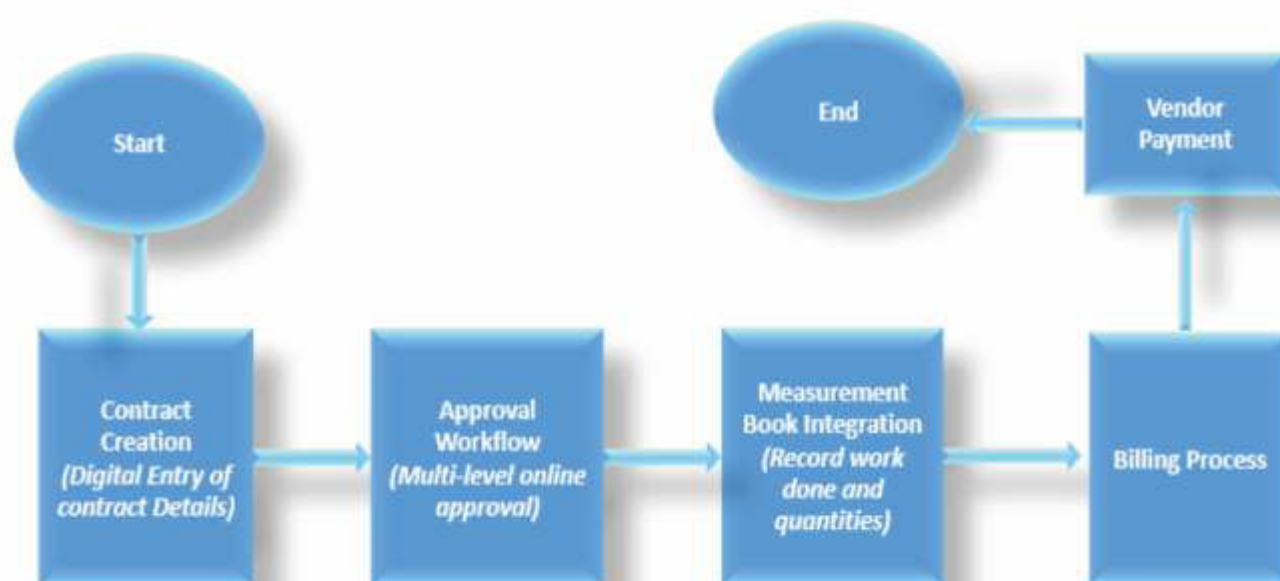
Objective:

- To streamline and automate the entire lifecycle of work contracts within the organization covering creation, approval, execution, monitoring, and payment to ensure transparency, compliance, timely delivery, and effective financial control over contractual obligations.

Implementation:

- Contract Creation allows digital entry of contract details, scope of work, value, duration, and terms.
- Approval Workflow lets the users define multi-level online approval as per delegation of powers.
- Measurement Book (MB) Integration to record work done and quantities verified.

Process Flow/Workflow:





Impact & Benefits:

- Ensures transparent tracking of work progress and costs.
- Improves contract lifecycle efficiency which speeds up the overall process.
- Supports timely vendor payments.

Potential for Replicability:

The system's secure digital workflow, audit trails, and automation make it easily adaptable for PSUs and government bodies, ensuring transparent and efficient complaint handling with minimal customization.

5. FMS Integration with GeM Portal

Brief Description:

The FMS–GeM Integration is a new functionality introduced in THDCIL's Financial Management System (FMS) to seamlessly link it with the Government e-Marketplace (GeM) portal. This integration enables direct updation of purchase and payment data, ensuring real-time synchronization and eliminating the need for repetitive manual interventions.

Background:

Earlier, purchase orders, invoices, and payment details processed through the GeM portal had to be manually entered and reconciled in THDCIL's FMS. This led to duplication of effort, chances of errors, delays in payment updation, and lack of real-time visibility of transactions. Moreover, compliance with GeM's Vendor Invoice Management (VIM) process required a more robust and automated solution.

To overcome these challenges, the FMS–GeM Integration has been developed, which digitizes and automates the flow of purchase and payment data between the two systems. By leveraging APIs and automated updates, the integration enhances efficiency, improves accuracy, and ensures compliance with statutory requirements.

Objective:

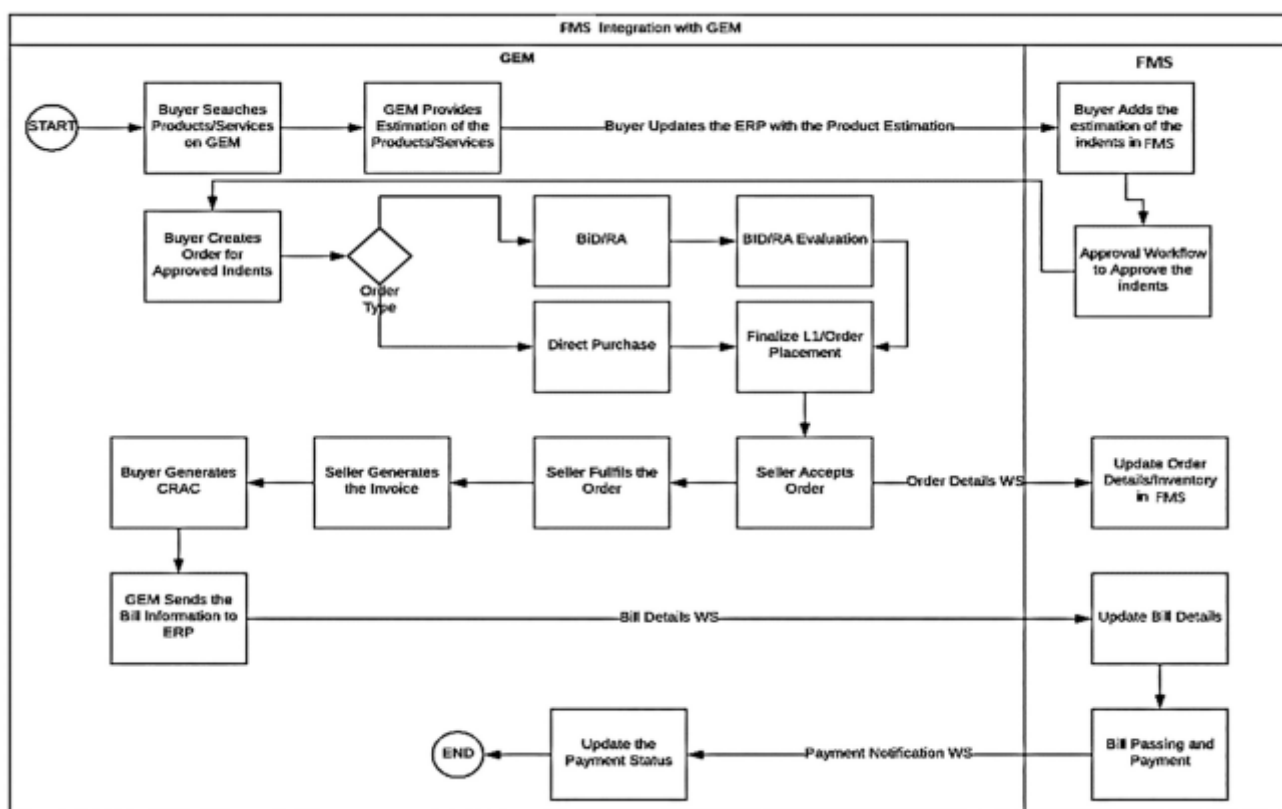
- To automate the flow of purchase and payment data between GeM and THDCIL's FMS, eliminating repetitive manual data entry.
- To enable real-time synchronization of Purchase Orders (POs), invoices, and payment status, improving operational efficiency.
- To ensure transparency and compliance with GeM's Vendor Invoice Management (VIM) process.
- To build a reliable digital repository of GeM-related transactions for monitoring, audit, and reporting purposes.

Implementation:

- API-Based Data Transfer – Integration of APIs such as Bill Summary, Get Bill Details, and Payment Status to fetch purchase and billing data directly from GeM into FMS.

- Payment Method Alignment – Configuration to allow Admin users to define payment methods, enabling buyers to place orders using the selected method for seamless processing.
- Automated Status Updates – Payment status is automatically updated from FMS to GeM once processed through Finance and bank RTGS, ensuring transparency and real-time tracking.
- Centralized Monitoring – All transaction data maintained digitally within FMS for improved reporting, reconciliation, and audit readiness.

Process flow/Workflow:



Impact & Benefits:

- Reduces duplication of work and manual errors in PO, bill, and payment updates.
- Improves payment cycle efficiency and vendor satisfaction by providing real-time status updates on GeM.
- Enhances compliance with GeM guidelines and boosts transparency in procurement-related financial transactions.

Potential for Replicability:

The FMS–GeM integration, with API-based data exchange and automated payment status updates, can be replicated across PSUs and government organizations to enhance efficiency, accuracy, and compliance in financial transactions.



6. Implementation of Anti Bribery Management System (ABMS Policy)

Brief Description:

THDCIL has implemented the Anti-Bribery Management System (ABMS) in line with the ISO 37001:2016 standard with the objective of strengthening the integrity framework of the organization and fostering a culture of zero tolerance towards bribery and corruption.

Background:

THDCIL has consistently emphasized transparency, fairness, and ethical governance in its operations. While preventive vigilance and compliance measures were earlier implemented through internal policies and vigilance oversight, the growing need for a globally recognized framework to further reinforce integrity led to the adoption of the Anti-Bribery Management System (ABMS) ISO 37001:2016.

Developed and implemented in-house, the system has been certified by the Bureau of Indian Standards (BIS), covering THDCIL's Corporate Office and NCR Office, Kaushambi. ABMS provides a structured mechanism to prevent, detect, and respond to bribery risks by embedding controls such as due diligence, risk assessment, monitoring, and reporting across functions.

This initiative not only ensures compliance with international best practices but also enhances stakeholder trust by reaffirming THDCIL's commitment to ethical business conduct, accountability, and transparency. The certification marks a significant milestone in institutionalizing preventive vigilance through globally benchmarked practices.

Implementation:

- **Anti-Bribery Manual & Policy:** A comprehensive ABMS Manual and an Anti-Bribery Policy have been developed. The policy has been incorporated in all tender documents, ensuring compliance across procurement and contractual processes.
- **Risk Identification & Monitoring:** Bribery risks associated with various departments and processes have been systematically identified, documented, and are being continuously monitored to ensure adherence to anti-bribery controls.
- **Capacity Building:** Structured anti-bribery training programmes have been rolled out, covering nearly 90% of employees to date, with the target of achieving 100% coverage by December 2025.
- **Audit & Review:** Periodic audits, reviews, and continual improvements ensure that the system remains robust, effective, and aligned with evolving best practices.

Impact & Benefits:

- **Proactive Risk Mitigation** – Enables systematic identification, assessment, and mitigation of bribery-related risks.
- **Global Alignment** – Aligns THDCIL with international best practices and statutory requirements.
- **Enhanced Stakeholder Confidence** – Strengthens trust among stakeholders, clients, and partners.
- **Efficiency & Accountability** – Embeds ethical governance into day-to-day operations, reducing vulnerabilities.
- **Structured Vigilance** – Unlike conventional preventive vigilance, ABMS provides a measurable, internationally recognized framework for bribery prevention through integrated policies,

procedures, and training.

- Commitment to Ethics – Demonstrates THDCIL's resolve to uphold the highest standards of transparency, fairness, and preventive vigilance.

Potential for Replicability:

The ISO 37001:2016–based ABMS framework at THDCIL showcases how structured policies, risk assessments, and training can be institutionalized to curb bribery risks. Its scalable and replicable model can be adopted by other PSUs and government organizations to strengthen governance, reinforce ethical culture, and align with global anti-bribery practices, thereby setting a benchmark for public sector integrity initiatives.











BEST PRACTICES in SJVN

1: Digital Vigilance Clearance Portal in SJVN

Brief Description of the Initiative

SJVN's Digital Vigilance Clearance Portal delivers instant automated clearance, minimizing human intervention and ensuring ethical administration and safeguarding integrity at every stage.

Implementation:

SJVN launched a **Digital Vigilance Clearance Portal (DVCP)**—a centralized online platform designed with preventive vigilance principles in mind, to:

- Automate submission of clearance requests: Departments and project offices upload required documents via secure interface.
- Route each request through defined workflows e.g. departmental vetting officer, Investigation wing, Deputy CVO, Chief Vigilance Officer etc.
- Enable transparent status tracking: Requestors see live progress and pending actions, reducing follow ups.
- Maintain audit logs: Time stamped actions, user IDs, attachments and comments are automatically archived.
- Use role based access control: Only authorized users see relevant parts of the workflow.

Impact and Benefits:

Quantitative Impacts

Metric	Before Portal (Manual)	After DVCP Implementation	Improvement
Average clearance time (working days)	7–10 days	2–3 days	~70% reduction
Clearance requests pending	~25%	<5%	~80% fewer
Manual follow ups/calls per month	~100	~10	~90% reduction
Paper based file movements	~300 pages/month	~zero paper	fully digital





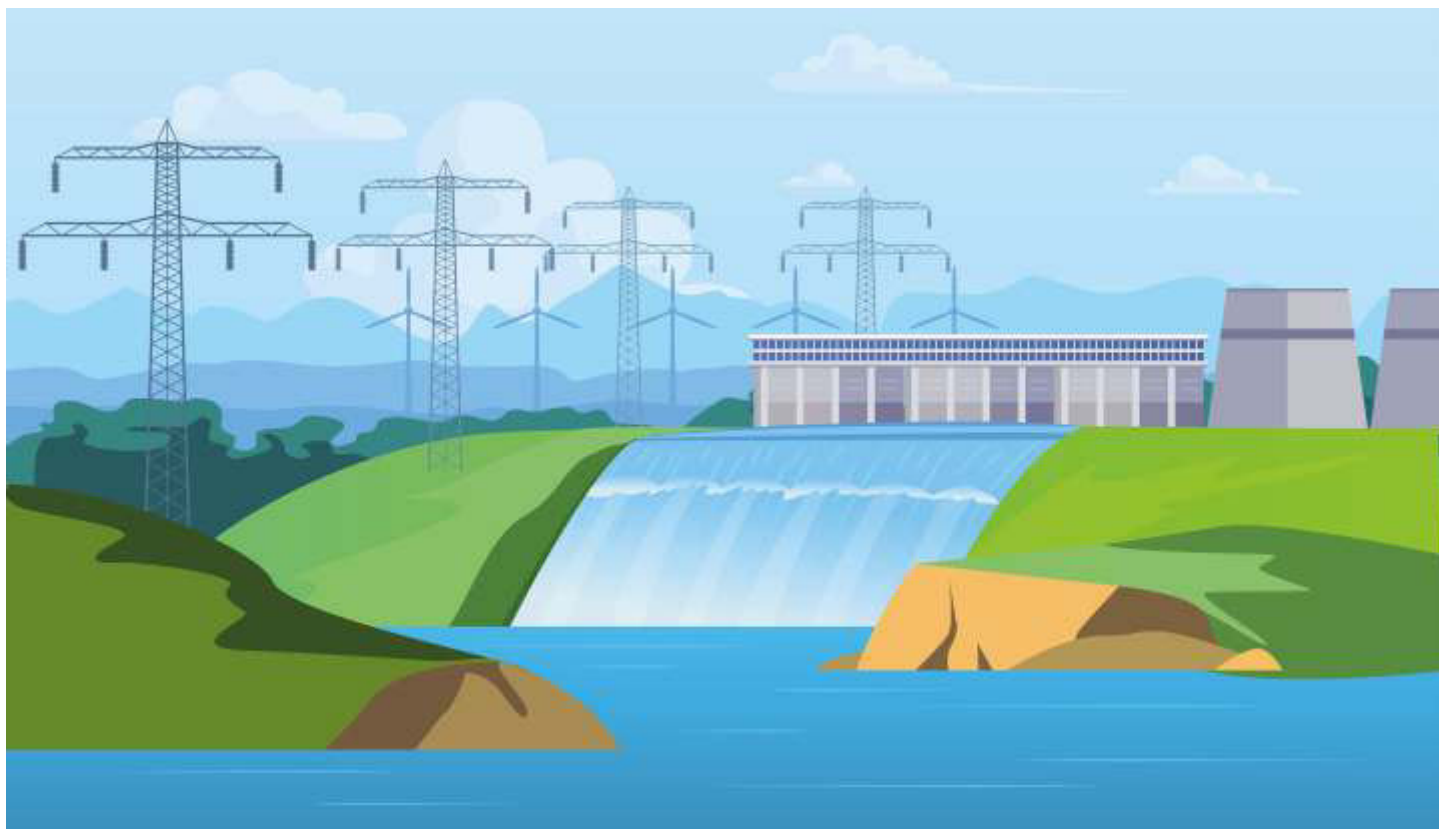
2: Implementation of SAP ERP Employee Self-Service (ESS) Portal in SJVN

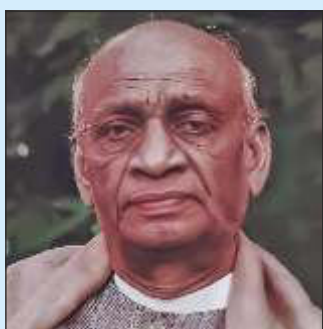
Brief Description of the Measure / Initiative

This initiative involves the strategic implementation of an SAP ERP Employee Self-Service (ESS) portal within SJVN Limited. The ESS portal is a robust, web-based, user-friendly application that allows employees to perform a wide range of HR and administrative tasks independently, without needing direct intervention from the HR department. This measure aims to streamline processes, reduce administrative burden, enhance transparency and enhance employee experience across SJVN's diverse and geographically dispersed workforce by providing a centralized platform for managing their professional life-cycle, from attendance and leave to claims and performance management.

3: Implementation of Anti-Bribery Management System (ABMS) at SJVN Limited

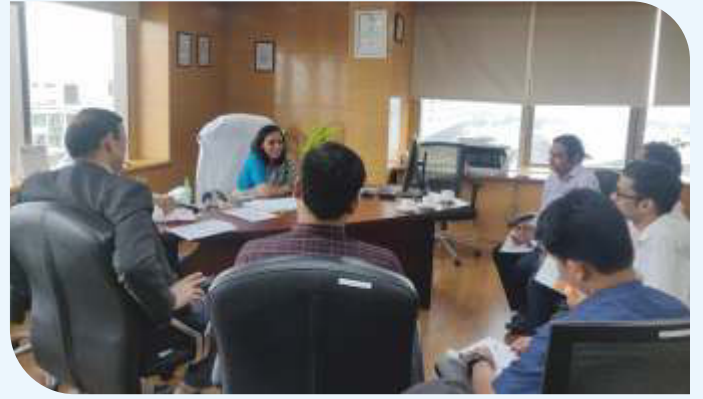
Committed to ethics, transparency, and sustainability, SJVN is the 1st Power PSU which has implemented a robust **Anti-Bribery Management System (ABMS)** in alignment with ISO 37001:2016 standards. Recognizing that corruption and bribery could jeopardize its operations, reputation, and stakeholder trust, SJVN developed the ABMS to institutionalize a culture of integrity, legal compliance, and effective governance across all operations, including its 02 corporate offices and 12 major project sites spanning Himachal Pradesh, Uttarakhand, Maharashtra, and Gujarat. As a responsible public entity, SJVN aims to provide clean and affordable electricity while ensuring strict compliance with anti-bribery laws and ethical standards.





“ Character is the bedrock of leadership; let integrity and honesty be your guiding principles ”

Sardar Vallabhai Patel





ग्रिड-इंडिया
GRID-INDIA





Grid-India

Monthly Sensitization of Employees about CDA Rules through Email

Catching the Eye

At GRID-INDIA, ethics are reinforced not just through rules but through constant engagement. Monthly sensitization emails on CDA Rules keep employees reminded, informed and accountable — ensuring that integrity remains a living practice, not just a policy.

कर्मचारियों को जागरूक करने के उद्देश्य हेतु सतर्कता विभाग द्वारा एक पहल : अगस्त 2025

 DVCVO
MIDP-8/79, 12/22 PWA
Grid-India HR Group; Grid-India Finance Group; Grid-India Group; S. C. Savana (एच. बी. सम्बन्ध); CVD; Directors; RUDCHeads; Abhishek Mandal; अमिताभ खेरवा; Anko Harang (सिडु नरेश) ३

महोदय / महोदया,
Sir / Madam,

सतर्कता विभाग प्रत्येक माह कर्मचारियों को जागरूक करने के उद्देश्य से सीडीए नियमों पर संक्षिप्त जानकारी साझा करता आ रहा है। इसी क्रम में इस माह सीडीए नियम 7 के बारे में बताया जा रहा है।
Vigilance Department has been sharing brief information on CDA Rules every month for the purpose of making the employees aware. In this sequence, this month, CDA rule 7 is being shared.

नियम संख्या 7: प्रदर्शनों और हड़तालों में भाग लेना:

कोई भी कर्मचारी:

क) किसी भी प्रदर्शन में भाग नहीं लेगा या भाग नहीं लेगा या दूसरों को किसी प्रदर्शन में भाग लेने के लिए नहीं उकसाएगा, जिसमें किसी अपराध को बढ़ावा देना शामिल हो।

ख) किसी कानून या नियम के प्रावधानों के उल्लंघन में हड़ताल या जबरदस्ती या शारीरिक दबाव के किसी भी रूप का सहारा लेना या उकसाना/उकसाना/उकसाना।

ग) परिसर के प्रवेश द्वार सहित कंपनी के परिसर/प्रतिष्ठानों के भीतर किसी भी प्रकार का धरना-प्रदर्शन नहीं करेगा।

Rule 7: TAKING PART IN DEMONSTRATIONS AND STRIKES:

No employee shall:

a. Engage himself or participate in any demonstration or incite others to take part in any demonstration, which involves incitement to an offence.

b. Resort to or abet/incite/instigate any form of strike or coercion or physical duress in contravention of the provisions of any law or rule having the force of law.

c. Resort to any form of picketing within the Company's premises/establishments including the entrance of the premises.

नोट : नियम का हिन्दी अनुवाद करते समय शब्दों का सरलीकरण किया गया है अतः किसी भी प्रकार की विषमता पाये जाने की अवस्था में अंग्रेजी संस्करण मान्य होगा।
Note: While translating the rule in Hindi, the words have been simplified; therefore, in case of any discrepancy, the English version will be valid.

भवदीय
(अनुराग गंगवार)
मुख्य महाप्रबंधक (मानव संसाधन) एवं उप मुख्य सतर्कता अधिकारी
सतर्कता विभाग, केंद्रीय कार्यालय
एच ३९, आईएचबीआई टावर, मेहरा प्लेस, नई दिल्ली - 110019

How it works:

- Every month, the Vigilance Department carefully selects one or more key clauses or provisions from the CDA Rules for focused sensitization.
- A dedicated email is drafted in simple, clear language (Both Hindi and English) explaining the selected rule(s) in detail — what they mean, why they exist and how they apply to real-life work situations.
- Employees are encouraged to reflect on their own practices, spot potential gaps and reach out to Vigilance or HR for clarification, if required.



- The emails are designed to be crisp, visually engaging and easy to read, ensuring maximum reach and retention.

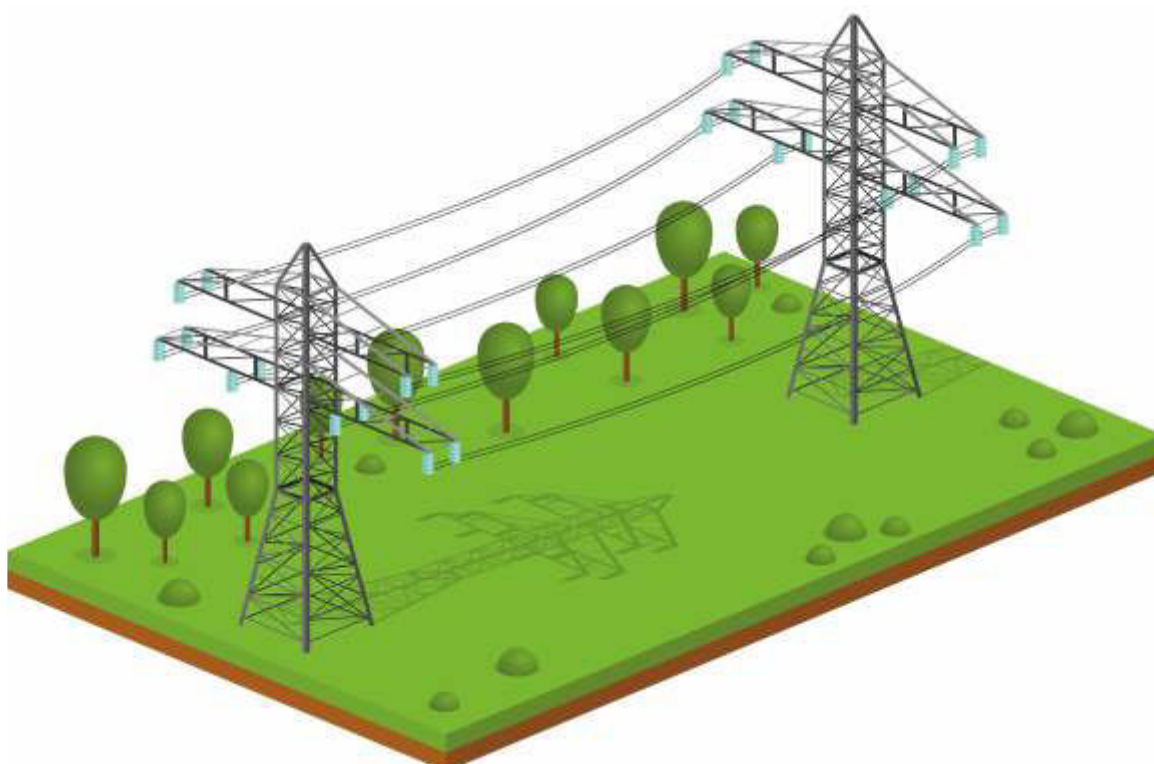
The initiative has also strengthened the culture of self-regulation — employees feel more confident in identifying and avoiding potential violations, thus reducing the burden of reactive vigilance and disciplinary action.

Way Forward

GRID-INDIA plans to further enrich this initiative in the coming years. Some proposed enhancements include:

- Creating an online archive of all previous CDA sensitization emails on the company intranet, allowing employees to revisit topics as needed.
- Introducing interactive quizzes or short assessments linked to the monthly email to reinforce learning and make it more engaging.
- Incorporating video snippets or infographics in the emails for easier understanding of complex rules.
- Inviting employees to share anonymous queries or suggestions for topics they find confusing or under-discussed, so that future sensitizations address real concerns.
- Linking the monthly sensitization themes to periodic town halls or workshops for deeper discussion and sharing of best practices.

By sustaining this initiative and evolving it with employee feedback, GRID-INDIA aims to build an organisational culture where every individual is both aware and accountable — a culture where CDA Rules are not just read but truly lived.



Digital Mode of Payment for Expenses under Employee Reimbursement Schemes in GRID-INDIA

Introduction

GRID-INDIA is fostering a culture of transparency and accountability by mandating cashless, digital transactions for all employee reimbursement claims. This initiative not only supports the Government of India's Digital India vision but also strengthens preventive vigilance through audit-ready, verifiable transactions.

Addressing the Issue

On the advice of the Vigilance Department, the Human Resources and Finance Departments of GRID-INDIA jointly implemented a policy mandating digital payment modes for all expenses claimed under employee reimbursement schemes. This aligns with Government of India's Digital India initiative, supported by platforms like UPI, BHIM, and Internet Banking, and is also consistent with DPE guidelines for CPSEs encouraging digital transactions.

Way Forward

GRID-INDIA aims to build on this initiative by introducing:

1. Awareness campaigns: Regular sensitisation emails highlighting the importance of cashless claims.
2. Analytics dashboards: HR/Finance/Vigilance teams to track claims, exceptions, and trends for early detection of anomalies.
3. Policy reinforcement: Linking digital reimbursement compliance with CDA Rules to make accountability clearer.











Energy Efficiency Services Limited (EESL)

Best Practices of Energy Efficiency Services Limited (EESL) Towards Preventive Vigilance

1. Mandatory Document Verification Post-Recruitment

a) Brief Description of the Measure

This initiative involves the comprehensive and mandatory verification of all documents and credentials submitted by newly recruited employees, conducted immediately after their appointment. The scope of this verification is extensive, covering educational qualifications, past employment records, professional references, identity proofs, and address verification, along with any necessary background checks.

b) Background of the Measure

Over the past five years, some complaints were received regarding forged documents submitted during recruitment. Due to the absence of a verification process, such cases were increasing. To ensure integrity, performance, and accountability, EESL introduced a comprehensive post-recruitment verification system, making the process robust and mandatory.

c) Implementation of the measure

The measure has recently been implemented to ensure authenticity of employee credentials and safeguard organizational integrity.

2. Restriction of e-Office Access for Third-Party Users

a) Brief Description of the Measure

This measure involved the discontinuation of e-Office licenses for all third-party employees of EESL/CESL, which resulted in a reduction of active e-Office IDs from 500 to 250.

b) Background of the Measure

An inspection was done by EESL vigilance team in

one of the EESL state office and learned that many outsourced employees (third-party employees) were given e-Office authorization. The vigilance team found that these employees were initiating note sheets that formed the basis of significant decisions involving financial implications (like vendors'/contractors' bill payments and penalty levies) and other key administrative decisions related to tenders and procurements. Also, it came to light that pilferage of documents is happening which are being used against EESL during arbitration & legal cases.

It was highlighted that since outsourced employees are not on EESL's payroll, they are not governed by EESL's CDA rules. Hence e-office access will be restricted or removed and given authority related to EESL regulars employees only.

c) Implementation of the Measure

As per the recent instructions from the Competent Authority, the e-Office IDs of all third-party employees have been deactivated, since the organization holds no direct liability for them.

d) Impact and Benefits of the Measure

It enhances systemic accountability & transparency by ensuring that decisions with financial and administrative implications are handled by employees who are bound by the organization's CDA rules, in line with CVC guidelines. This will also help in reducing pilferage of documents and operational continuity as well.

e) Potential for Replicability

The measure is highly replicable and can be implemented and can be applied to any software, system, or service where a significant portion of user accounts are held by external parties.

SAVE
ENERGY

SAVE
LIFE









Bureau of Energy Efficiency

Best Practices Adopted by BEE, its Achievements and Impact

Over the past years, the Bureau of Energy Efficiency has consolidated its position as the **driving force behind India's energy efficiency movement**. Its wide-ranging initiatives have created measurable impact across industry, transport, buildings, MSMEs, and households, demonstrating how a well-structured institutional approach can bring large-scale transformation.

Digital portals make accessing BEE schemes transparent, fast, and efficient. They reduce human intervention and minimize corruption. Citizens can apply, track, and complete processes online. Overall, these platforms ensure convenience, accountability, and timely solutions.

1. Facilitation Centre (ADEETIE)

- Provides **financial assistance**, guidance and support to industries for adopting energy-efficient technologies.
- Operates through a **dedicated online Facilitation Centre** for transparent and streamlined applications.
- Helps industries **reduce energy costs and emissions**, boosting competitiveness and sustainability.
- Web portal address : <https://www.adeetie.beeindia.gov.in/>

2. Standards and Labelling (S&L) Programme and Portal

Its primary objective is to provide consumers with accurate information on the energy consumption and efficiency of appliances and equipment, thereby empowering them to make informed purchasing decisions. At the same time, it

encourages manufacturers to adopt energy-efficient technologies, fostering market transformation towards sustainability.

- To digitize and streamline the process of registration, model approval, and compliance monitoring under the S&L Programme.
- To make the energy performance data of labelled appliances easily accessible for consumers, policymakers, and researchers.
- To enhance transparency and accountability in the energy efficiency rating and labelling system.
- To support India's goals of energy conservation and demand-side management by promoting efficient appliances.
- Web portal address : <https://www.beestarlabel.com/>

3. Perform, Achieve, and Trade (PAT) Scheme and PATNet Portal

- It is a market-based mechanism designed to enhance energy efficiency in energy-intensive industries and reduce overall energy consumption in a cost-effective manner.
- The scheme covers energy-intensive sectors such as **cement, steel, fertilizers, textiles, aluminum, chlor-alkali, pulp & paper, thermal power plants**, petroleum refineries, and railways. These sectors collectively account for a significant share of India's primary energy consumption.
- Each industrial unit, termed as a **Designated Consumer (DC)**, is assigned specific energy reduction targets based on its baseline energy consumption and potential for savings.



- Units that exceed their targets are awarded **Energy Saving Certificates (ESCerts)**.
- Units unable to meet their targets are required to purchase ESCerts to comply with the scheme.

The PATNet portal facilitates the following activities:

- **Digital Transparency** – Ensure reliable, paperless, and tamper-proof submission of energy data.
- **Ease of Compliance** – Help Designated Consumers (DCs) in energy-intensive industries comply with PAT scheme requirements.
- **Market Facilitation** – Enable trading of Energy Saving Certificates (ESCerts) through electronic platforms.
- **Monitoring & Tracking** – Provide a centralized database for energy performance of participating industries.
- **Stakeholder Engagement** – Create a common platform for interaction between BEE, Designated Consumers, State Designated Agencies, and Accredited Energy Auditors.
- Web portal address:
<https://escerts.gov.in/PortalUser/UsersLogin>

4. EV Yatra Portal

- BEE launched the EV Yatra portal (evyatra.beeindia.gov.in) to provide real-time information to electric vehicle (EV) users. The platform enables EV owners and potential adopters to locate nearby charging stations, plan inter-city and intra-city travel routes, and gain insights into the availability of charging infrastructure. This user-friendly digital platform enhances convenience and promotes confidence in EV adoption.
- By March 2024, India had successfully

operationalized **over 7,500 public EV** charging stations, ensuring better accessibility and reducing range anxiety for EV users.

5. SME Interventions (SIDHIEE)

SIDHIEE (Simplified Digital Hands-on Information on Energy Efficiency in MSMEs) portal acts as a comprehensive digital knowledge hub designed for a wide range of stakeholders, particularly those involved with micro, small, and medium enterprises (MSMEs).

The portal provides end-to-end support to MSMEs, assisting them with in energy efficiency. Some key components of the support include:

- Access to an interactive ChatBot that guides users with information on energy efficiency best practices.
- Up-to date technology demonstrations to showcase innovative solutions for MSME units.

A notable feature on the SIDHIEE portal is its calculator tool, which allows units to:

- Assess the energy efficiency of various utility systems within their enterprise.
- Calculate the specific energy consumption for their operational units, thereby enabling better energy management and cost savings.
- Web portal address:
<https://sidhiee.beeindia.gov.in/>

The development of this tool was grounded in extensive benchmarking studies, which involved approximately 350 units from the paper and steel sectors. These studies spanned about 40 industrial clusters and 13 different states across India.









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POWERGRID

POWER GRID CORPORATION OF INDIA LIMITED

(A Government of India Enterprise)

Regd. Office: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi - 110016, India

Ph.: 91-11-26560112, 26564892, Fax: 91-11-26601081

Corporate Office: 'Saudamini, Plot No. 2, Sector 29, Gurugram (Haryana)-122 001, INDIA,

Ph: 91-124-2571700-719, Fax: 91-124-2571760, 2571848 www.powergrid.in

One Nation, One Grid, One Frequency

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