



Conference Documentation Report

National Conference on Geology, Mining & Environmental Studies (GME-2025)



Date: 28th–29th March, 2025



Venue: Government College, Sundargarh



Introduction

The Department of Geology, Government College, Sundargarh, successfully organized the *National Conference on Geology, Mining & Environmental Studies (GME-2025)* on the 28th and 29th of March, 2025. This two-day academic event brought together a diverse group of geologists, mining professionals, environmentalists, academicians, researchers, and students from across India.

The primary objective of this conference was to explore recent advancements in geological research, sustainable mining technologies, environmental studies, and their implications for Odisha's rich geological landscape. Participants presented research papers, case studies, and technological applications ranging from structural geology to remote sensing, hydrology, and AI integration in geosciences.

The event stood out not just for its academic value, but also for its dynamic interaction between students, professionals, and policymakers, enabling a meaningful exchange of ideas that blended tradition with innovation.



Detailed Agenda of the Conference



9:00 AM to 11:30 AM | Inauguration Session



Venue: B.Ed Conference Hall, Government College, Sundargarh



Theme: Opening the Gateway to Geoscience Dialogue and Innovation

The inaugural session of the **GME-2025 Conference** began on a bright and hopeful morning, with participants and dignitaries gathering at the beautifully arranged conference hall of Government College, Sundargarh. The ambiance was vibrant, marked by academic enthusiasm, colorful banners, and a meticulously arranged stage displaying the conference theme.

◆ Registration and Reception of Guests

From 8:30 AM onward, attendees began arriving and registered at the entrance. Volunteers from the organizing committee assisted delegates with kits containing the conference

schedule, notepads, pens, and souvenir copies. This created a welcoming and organized start, setting the tone for professionalism throughout the event.

◆ Welcoming of Dignitaries and Lighting of the Lamp

The formal program began at 9:15 AM with the **arrival of distinguished guests**. Among them were:

- **Sri P.K. Nayak**, Managing Director of TRL
- Senior academicians and scientists
- Respected faculty members from partner institutions

They were welcomed on stage with floral bouquets and applause from the audience.

The ceremonial **lighting of the lamp** followed — a traditional Indian practice symbolizing the dispelling of ignorance and the ushering in of knowledge. As the diya was lit by the Chief Guest and other dignitaries, a calm reverence filled the hall, marking the spiritual beginning of the event.



◆ Welcome Song by College Choir

Students of the college choir performed a soulful **welcome song** in Odia, setting a serene and heartfelt mood. It reflected the cultural richness of Odisha while offering a warm embrace to the visiting scholars and students.

◆ Welcome Address

Dr. Siba Prasad Mohanty, Assistant Professor and Head of the Department of Geology, gave the **official welcome address**, acknowledging the collaborative efforts of all participating institutions. He highlighted the objectives of the conference and how it aimed to bridge the gap between academic research and practical field challenges in Odisha.

“This platform is not only about learning; it's about engaging, sharing, and building a geological future that respects both our land and the people who depend on it.”

◆ Address by Sri P.K. Nayak

Sri P.K. Nayak, President of TRL, delivered a powerful keynote, focusing on Odisha's untapped geological potential and the urgent need for scientific research to be applied in policy and mining practices. He emphasized the ethical dimensions of resource extraction and the importance of nurturing young geoscientists.



◆ Address by Conveners and Organizing Committee Members

The conveners and co-conveners of the event took turns to share their vision behind organizing the conference. They elaborated on the themes selected, the broad spectrum of speakers invited, and the significance of student participation in such national-level platforms.

◆ Nirab Prarthana (Silent Tribute)

A moment of **silent prayer** was observed in honor of **Md. Sahid Ummar**, a late alumnus of the college's Geology Department, and other departed members of the academic community. The hall stood in unified silence — a deeply emotional moment reflecting respect, gratitude, and remembrance.



◆ Souvenir Release

One of the session's most awaited moments was the **release of the official souvenir** of GME-2025 — a beautifully designed publication containing abstracts, conference themes, and messages from dignitaries. As the souvenir was unveiled, it was met with applause, symbolizing the collective efforts of the contributors and organizers.



◆ Address by Chief Guest and Special Invitees

The **Chief Guest**, Sri P.K. Nayak, President of TRL delivered an encouraging and forward-thinking address. He praised the academic efforts behind the event and stressed how geological insights could shape better governance and sustainable development in mineral-rich districts like Sundargarh.

Other invited dignitaries offered short but impactful speeches, focusing on:

- Innovation in geological sciences
- Encouraging students to take up research
- Multidisciplinary collaboration between geology, AI, and environmental science

◆ Vote of Thanks

The formal session concluded with a **Vote of Thanks** delivered by a faculty member from the Department of Geology. He sincerely acknowledged:

- All guest speakers and sponsors
- Partner institutions (including Government Women's College, IQAC, AAG, Bhu-Bigyan Sangathan, and Cehesh Trust of India)
- Volunteers, students, and technical support staff who made the event possible

◆ National Anthem

As a final gesture of unity and national pride, everyone rose to sing the **Indian National Anthem**, officially concluding the inaugural session

TECHNICAL SESSION – I (11:30 AM to 01:15 PM)

Theme: *Structural, Geotectonics & Precambrian Stratigraphy*

Chaired by: Dr. J.K. Nanda & Dr. Suresh Ch. Patel

Topics:

- Precambrian provinces of Odisha
- Geodynamic evolution of mobile belts in Western Odisha
- Stratigraphic observations near Kuchinda Granitic Complex
- Lithological correlation of Bastar Craton
- Tectonic implications for Singhbhum Craton



Lunch Break (01:15 PM – 02:00 PM)

TECHNICAL SESSION – II (02:00 PM – 02:45 PM)

Theme: *Petrology, Engineering Geology & Geochemistry*

Chaired by: Dr. Sandeep N. Kundu

Topics:

- Mud volcanism: Geological features and hazards
- Petrography of Pakkanadu-Mulakkadu rock complex
- Petrogenesis of Malangtoli Arc Basalt
- Uranium mineralization and U-Pb geochronology studies



TECHNICAL SESSION – III (02:45 PM – 04:15 PM)

Theme: *Hydrology, Remote Sensing, GIS & Oceanography*
Chaired by: Dr. K.C. Nayak

Topics:

- Groundwater management strategies in semi-arid zones
- Water quality assessment using EWQI in Northern Odisha
- GIS applications in groundwater monitoring
- AI integration in mining operations in Odisha



☉ High Tea (04:15 PM – 04:30 PM)

🖼️ Poster Presentation Evaluation

🕒 **Time:** 04:30 PM – 05:30 PM

📍 **Venue:** Room no.6, Department of Geology, Govt. College, Sundargarh

🎯 **Theme:** Poster Presentation

🌍 Overview

As the technical sessions concluded for the day, participants, guests, and evaluators gathered at the dedicated poster zones where **student researchers, early-career scientists, and postgraduate scholars** had visually presented their work on various geological disciplines. The Poster Presentation session was one of the most vibrant components of the conference, turning the college corridors into a mini science exhibition.

The Poster Presentation Evaluation session at GME-2025 was more than just a display — it was an **interactive platform** that celebrated young talent, creative thinking, and applied geological science. It gave space to ideas that may one day evolve into research papers, policies, or field explorations. Most importantly, it showcased how geology isn't just confined to textbooks or field boots—it can be visual, innovative, and engaging.



Cultural Programme

 **Time:** 05:30 PM – 08:00 PM

 **Venue:** : B.Ed Conference Hall, Government College, Sundargarh

As the academic sessions of the day wrapped up, the energy of the event shifted into a more colorful and expressive phase with the commencement of the much-anticipated **Cultural Programme**. This vibrant evening served as a perfect conclusion to a day rich with scientific exchange, allowing delegates, students, and guests to unwind and experience the artistic spirit of Odisha.

Sambalpuri Group Dance

In one of the most energetic highlights of the night, a **Sambalpuri folk dance** troupe set the stage ablaze with vibrant choreography, spinning handwoven dupattas and beating dhols. The performance was a celebration of tribal traditions and connected the crowd with the earthy rhythms of Odisha's hinterlands.

Solo & Duet Songs

There were **solo and duet singing performances**, blending Hindi retro classics with regional tunes. A duet rendition brought emotional depth to the evening, echoing the spiritual undercurrents of the state's coastal identity.

Special Acknowledgments & Performers' Felicitation

The performers—students, alumni, and local artists—were **felicitated by the chief guest and organizing committee members** for their outstanding contributions. The event also saw spontaneous singing from some faculty members, which added a personal and heartfelt touch.



DAY 2: March 29, 2025

TECHNICAL SESSION – IV (10:00 AM – 11:30 AM)

Theme: *Paleontology, Environmental & Mining Geology*

Chaired by: Dr. S.P. Singh

Topics:

- Sustainable development of mineral resources in Odisha
- Smart mining and digitalization: Case of Raikela Iron Ore Mine
- Groundwater depletion and environmental solutions.



TECHNICAL SESSION – V (11:30 AM – 01:00 PM)

Theme: *Phanerozoic Stratigraphy, Sea-Level Rise & Economic Geology*

Chaired by: Dr. D.P. Kuity

Topics:

- Sea-level rise and its impact on Indian coastlines
- Coal seam behavior monitoring in Chhattisgarh mines
- Economic potential of Quaternary formations in Burla region.



Lunch (01:00 PM – 01:30 PM)

Valedictory Session (02:00 PM – 03:00 PM)

- Reflections by the organizing committee
- Distribution of mementos and certificates
- Address by chief dignitaries
- Vote of thanks and official closing remarks.





Conclusion

The National Conference on GME-2025 was a grand success, not only in its execution but also in creating a platform for multidisciplinary knowledge exchange. It brought attention to pressing geological and environmental issues and encouraged young minds to engage in scientific research with societal relevance.

Each session was well-structured, diverse in content, and highly interactive. The blend of scientific rigor and practical exploration ensured that participants left with enhanced knowledge and renewed motivation.

From discussions on the ancient tectonic setup of Odisha to modern mining practices and environmental sustainability, GME-2025 reinforced the critical role of geology in shaping both the economy and environment of the region.

