

Science and Applied Research Alliance and Support (SARAS)

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Coal India's flagship subsidiary **NCL(Northern Coalfields Limited)** has set up a centre named "Science and Applied Research Alliance and Support"(SARAS) to promote Innovation, Research & Development, and skill development along with improving company's operational efficiency and utilize resources at the optimum level.

About SARAS

- NCL has established SARAS in **collaboration with the Indian Institute of Technology (BHU), Varanasi.**
- SARAS, **set up in 2018,** is the outcome of the vision and mission of NCL.
- **The core research areas of SARAS lies in:**
 1. advancement of mining technologies
 2. clean coal technologies
 3. climate change
 4. waste management
 5. carbon capture utilization
 6. new & renewable energy
 7. efficiency improvement and cost reduction besides providing scientific support to NCL units for improving availability, reliability, and efficiency.
- SARAS's **emphasis is on enhancing the overall productivity of mines** by enhancing the performances of HEMMs, CHPs as well as developing greener technologies which in turn will translate into cost reductions as well as cleaner tomorrow.
- SARAS is also keen on **collaborating with**

Institutes/organizations for research related to the development of cost economic technologies in its core mining field as well as in the field of climate change, new & renewable energy, efficiency & reliability enhancement of its overall units.

- Initiatives such as the **development of the Solar Wind Hybrid System for electricity generation**, development of composite **membrane reactor for hydrogen production has been taken up by SARAS** which is a prime thrust towards clean and economic power generation.
- Efforts are being made for reducing the cost of production through proper and correct health assessments of critical components of production units, developing diagnostic tools and ensuring environmental and safety compliances.
- The SARAS would help establish centres of excellence to ensure technical support to R&D along with thrust on quality skill development and employment to local youths in and around the company's operational area.