SJVN Partners with IIT Patna to Improve Tunneling Project Performance

Why in News?

Recently, **SJVN Limited** has signed a **Memorandum of Understanding (MoU)** with the **Indian Institute of Technology Patna (IIT Patna)** to use advanced geological models in SJVN's tunnelling projects, thus significantly reducing time and cost overruns.

Key Points

- One of the key outcomes of this partnership will be the **development of predictive analytics algorithms.**
    - These algorithms, leveraging integrated geotechnical data, will **forecast potential risks and provide early warning systems** specifically tailored for tunnelling projects.
    - Such proactive measures are expected to substantially **mitigate time and cost** overruns during project execution.
- The primary focus of the MoU is to **develop cutting-edge methodologies** which integrate diverse geotechnical data sources.
    - These would include **geological surveys, borehole data, geophysical measurements and monitoring data from projects of SJVN.**
- The collaboration also aims to evaluate the intricate relationship between overburden and deformation, thereby enhancing the evaluation and design of support systems crucial for tunnelling projects.
    - By harnessing integrated geotechnical data and 3D geological models, SJVN and IIT Patna aim to **identify and analyze potential risks and hazards.**

Satluj Jal Vidyut Nigam (SJVN Limited)

- It is an **Indian public sector undertaking** involved in hydroelectric power generation and transmission.
- It was **incorporated in 1988 as Nathpa Jhakri Power Corporation,** a joint venture between the Government of India and the Government of Himachal Pradesh.

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