NGT ruling on INO Observatory

Why in news?

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The National Green Tribunal (NGT) upheld the environmental clearance granted to the India-based Neutrino Observatory (INO) recently.

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What does the ruling say?

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- The application for environmental clearance was referred to Environmental Appraisal Committee (EAC) by the State Environment Impact Assessment Authority of Tamil Nadu as it preferred the centre to assess a project of this nature.
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- Environment ministry (MoEFCC) gave the clearance on March 2018, but it was challenged in NGT by Pooulagin Nanbargal.
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- The INO project was approved under **category B**, even though it is about to located near an eco-sensitive national park.
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- Thus the organization objected to the category under which the project was cleared.
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- However, the NGT held that the environment ministry has the legal and technical competence to assess the INO project and upheld the environmental clearance.
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- The judgment states that it was correct on the part of the EAC and the ministry to appraise the project at their level.
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- However, the court reiterated that the INO must also obtain approval from National Board for Wildlife.
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- This is because the proposed site is about 4.9 km from Mathikettan Shola bird sanctuary bordering Kerala.

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- Any major activity within 5km from any wildlife sanctuary requires a specific approval by the National Board for Wild Life.
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- Also, NGT ruled that specific or general condition or recommendation made by the committees and expert groups on Western Ghats will be mandatorily made applicable in the current project of INO.
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What is the INO project?

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- It is a particle physics research project to primarily study the elusive sub-atomic particles called neutrinos.
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- Neutrinos are extremely tiny elementary particles that are omnipresent in universe which carries no electric charge.
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- It is considered to be the second most abundant particle in the universe after the photon, or light particle.
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- Yet, they are very difficult to detect because they pass seamlessly through all kinds of matter, unimpeded and undetected.
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- Its rest mass is almost zero (1 millionth of an electron).
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- It interacts only via weak short range subatomic forces and gravity.
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- Hence its detection needs high-end instruments and an environment that is effectively shielded from other radiant interference.
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- Hence, a cavern is being carved out at the depth of 1,300 meters (4,300 feet) below the Western Ghats stretch in Bodi West Hills in Theni district for establishing the research site.
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- An underground laboratory will be located there, nearly 1.5 km below the Earth’s surface, where a giant neutrino detector is to be placed.
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- The overhead rock will effectively shield it from natural cosmic radiation from outside.
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- Many countries are carrying out research on neutrinos, believing that it holds important clues to some basic questions on the universe.
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When will it operationalize?

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- The original timeline had envisaged experimental work starting from 2017, later advanced to 2020.
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- It is now unlikely to begin before 2025, even if construction starts next year.
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- Construction of the underground facility would take at least 5 years and hence the project cost too is likely to escalate.
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What are the challenges?

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- **Environment -** It has had to move from its initially proposed location, because the nearby Mudhumalai National Park had been declared a tiger reserve during the same time.
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- Hence this second site was selected.
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- **Litigations -** The project has been mired in all kinds of trouble such as litigation, public protests, opposition from NGOs and political parties, including the recently ended litigation with NGT.
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- **Red Tapes -** Bigger uncertainties in terms of government approvals, meanwhile, are still to come.
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- The project applied for clearance from the National Board of Wildlife only in January this year and that approval is still awaited.

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- Last year, the INO was told it would also need building approval from relevant state government agencies.
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- The building plan is being prepared and an application is likely to be moved later this month.
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- It is unclear how much time it will take to get that approval.
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- The Tamil Nadu government, on its part, has taken its time deciding on approvals for the project.
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- **Cost -** The Union government had, in 2015, approved a budget of Rs 1,583 crore for the project.
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- That budget was based on cost assessments done in 2012.
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- It is estimated the project would now cost at least 25% more than that amount.
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Source: The Indian Express

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Quick Facts

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Categories under EIA

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- The EIA Notification, 2006, broadly divides all projects into two categories, Category A and Category B, based on potential impacts over an area and on human health and natural and man-made resources.
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- Accordingly, all Category A projects required to undertake EIA and a public hearing and its clearance are granted by the Union environment ministry.
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- On the other hand, Category B projects are given a clearance by state level

authorities.
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- Category B projects are further classified as B1 and B2.
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- While projects under Category B1 also require an EIA and public consultation, those falling under B2 are exempted from requirements of both EIA and public consultation.
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