PARLIAMENT QUESTION: Tarang facility in India

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‘TARANG’ is a 64-bit High Performance Computing (HPC) system, capable of supporting multi-tasking, multi-programming, multi-user and time-sharing environment, of a proven architecture with scalable processing elements, scalable high performance I/O, scalable interconnection network and a balanced design to have 99.5% uptime with adequate redundancies and to avoid single point of failure so as to meet the operational requirements. The HPC system is supported by technical support facilities such as transformers, diesel generators, UPS, batteries, multiple utility paths, lighting system, adequate number of earthing pits and cables.

The compute capacity is about 1 Peta FLOPS, with 2 Peta Byte storage and 3 Peta Byte archival storage. Additionally, there is a dedicated standalone system for Artificial Intelligence (AI) and Machine Learning (ML) applications with a capacity of 15.5 Peta FLOPS.

The HPC would help scientists to run advance operational models for providing Tsunami Early Warnings for India and other 25 countries on the Indian Ocean rim. Further, the new computational facility will also be used for next generation Ocean State Forecast system having more accurate representation of physical processes, non-hydrostatic dynamics, high resolution nests for local forecasts and advanced data assimilation techniques and augment the quality of the forecasts using the available GPU processors.

This information was given by Dr. Jitendra Singh, Minister of State (Independent Charge) of the Ministry of Science & Technology and Earth Sciences**,** in a written reply in the Lok Sabha today.

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