

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 3270**  
TO BE ANSWERED ON 16.12.2024

**Environmental Impact of Blockchain based Technologies**

3270. SHRI G M HARISH BALAYOGI:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) Whether the Government has conducted or plans to conduct any studies/surveys on the Environmental Impact of blockchain based technologies, if so, the details thereof, if not, the reasons therefor;
- (b) Whether the Government has undertaken or planning to undertake any plans/initiatives to regulate carbon emissions from such blockchain based technology, if so, the details thereof, if not, the reasons therefor; and
- (c) Whether the Government has any mechanism in place to monitor the carbon emissions from blockchain based technology, if so, the details thereof and if not, the reasons therefor?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE  
(SHRI KIRTI VARDHAN SINGH)

(a) to (b) : At present there is no proposal to conduct any studies/surveys on the Environmental Impact of block chain-based technologies in the Ministry. Blockchain technology relies on data centers that consume significant amounts of energy. To address carbon emissions in such energy-intensive sectors, the Government of India has launched several initiatives under the *National Mission for Enhanced Energy Efficiency* (NMEEE), which includes:

**Perform, Achieve, and Trade (PAT):** Focuses on reducing Specific Energy Consumption (SEC) in industries.

**Market Transformation for Energy Efficiency (MTEE):** Promotes the use of energy-efficient appliances.

**Energy Efficiency Financing Platform (EEFP):** Connects financial institutions and project developers to support energy efficiency projects.

**Framework for Energy Efficient Economic Development (FEEED):** Develops financial tools to encourage energy efficiency.

Additionally, the government has actively promoted renewable energy, leading to rapid growth in non-fossil fuel-based energy sources.

(c): India being Party to the United Nations Framework Convention on Climate Change (UNFCCC) submits National Communications and Biennial Update Reports to UNFCCC on

a periodic basis. As part of these reports, National Greenhouse Gas (GHG) Inventory is prepared based on relevant Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories. There is no 'Blockchain technology' category/sub-category under these IPCC guidelines. However, greenhouse gas emissions from energy intensive processes are estimated under the Energy sectors.

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