

GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
LOK SABHA  
UNSTARRED QUESTION NO.3481  
TO BE ANSWERED ON 2/1/2019

CYBER PHYSICAL SYSTEM

3481. SHRI PREM DAS RAI:  
SHRI PRALHAD JOSHI:  
DR. C. GOPALAKRISHNAN:

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान और प्रौद्योगिकी मंत्री  
be pleased to state:

- (a) whether the Government has taken a decision to launch the National Mission on inter-disciplinary Cyber-Physical systems and if so, the details thereof along with the aims and objectives thereto;
- (b) the amount earmarked and allotted by the Union Government to implement this programme along with the areas listed under this particular mission;
- (c) the steps taken by the Ministry to promote research under the mission on Cyber-Physical Systems under Budget, 2018;
- (d) whether the Ministry plans to accord special focus to build capacity for research in the North Eastern Region through this Budget and if so, the details thereof and if not, the reasons therefor;
- (e) whether the Government is planning to set up technology innovation hubs, application innovation hubs and technology translation research hubs under National Mission on Inter-disciplinary Cyber-Physical Systems and if so, the details thereof; and
- (f) the manner in which these hubs would contribute in the field of cutting edge technologies like Artificial Intelligence, Internet of things, Machine learning, cyber security etc.?

ANSWER

MINISTER OF SCIENCE AND TECHNOLOGY, MINISTER OF EARTH SCIENCES AND MINISTER OF ENVIRONMENT,  
FOREST AND CLIMATE CHANGE  
(DR. HARSH VARDHAN)

विज्ञान और प्रौद्योगिकी मंत्री, पृथ्वी विज्ञान मंत्री और पर्यावरण, वन एवं जलवायु परिवर्तन मंत्री

(डा. हर्ष वर्धन)

(a) Yes, Madam. The Union Cabinet in its meeting held on 6.12.2018 has approved NM-ICPS at a total cost of Rs.3660 crore for 5 years.

Aim :

Self reliance and leadership in CPS technologies.

Objectives:

- (i) To promote basic and translational research in CPS technologies.
- (ii) To develop and demonstrate CPS technologies, prototypes and associated applications, keeping in view national priorities.
- (iii) To increase the number of scientists and technologists to cater to present and future needs of the country and to generate skilled workforce in these emerging areas.
- (iv) To create innovation, incubation and start-up ecosystem in CPS technologies.
- (v) To establish and strengthen the international collaborative Research.
- (b) In the Current Financial Year, no amount has been allotted. The Mission has four major activities i.e.
  1. Technology Development,
  2. Human Resource & Skill Development,
  3. Innovation, Entrepreneurship & Start-Up Ecosystem, and
  4. International Collaborations.
- (c) NM-ICPS was approved by the cabinet on 6<sup>th</sup> December, 2018 and supplementary budget note was submitted for allotment of funds.
- (d) Yes, Madam. The Mission envisages special focus to build capacity for research in the North Eastern Region. So far no budget has been allocated for the Mission.
- (e) Yes, Sir. The Mission targets the establishment of –
  - (i) 15 Technology Innovation Hubs (TIH) to focus on generation of new knowledge through basic and applied research in areas that is mandated to them. TIHs will be the source for fundamental knowledge / technologies that will be needed to keep India prepared for the next generation of technologies.
  - (ii) 6 Application Innovation Hubs to carry out translational research and work with Line Departments to develop prototypes, product development and implementations.
  - (iii) 4 number of Technology Translation Research Parks (TTRPs) with a focus to deliver products / technology ready for deployment or commercialization, picking up from any of the previous technology readiness levels (TRL).
- (f) Each Hub / Park will specialize in a thematic domains including Artificial Intelligence, Internet of Things, Machine learning, Cyber Security and will connect with all institutes/ groups / individuals who have expertise in that domain. It will co-ordinate across the country and will act as single point of contact for that particular domain. Hubs & TTRPs would work in close collaboration with Industry to create symbiotic relationship and world class products development.