



Daily Current Affairs

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106th session of Indian Science Congress

Why in news?

PM delivers inaugural address at 106th session of Indian Science Congress.

Theme of the event this year - '**Future India: Science and Technology**'.

Highlights:

- PM recalled the great Indian scientists of the past, including Acharyas J.C. Bose, C.V. Raman, Meghnad Saha, and S.N. Bose, and said that they served the people through "minimum resources" and "maximum struggle."
- "The life and works of hundreds of Indian Scientists are a compelling testament of integration of deep fundamental insights with technology development and nation-building. It is through our modern temples of science that India is transforming its present and working to secure its future,"
- The Prime Minister emphasized that the pursuit of science is fulfilled through the achievement of two objectives:
 1. generation of profound or disruptive knowledge; and
 2. use of that knowledge for socio-economic good.
- As we boost our discovery science ecosystem, we must also focus on innovation and start-ups. Government has launched the **Atal Innovation Mission** to promote innovation among our scientists. More Technology Business Incubators have been established in the last four years than in the forty years before that.

The Prime Minister mentioned major achievements of Indian science in 2018, including:

- production of aviation grade biofuel;
- Divya Nayan - a machine for visually impaired;
- inexpensive devices for diagnosis of cervical cancer, TB and dengue
- a real-time landslide warning system in the Sikkim-Darjeeling region.

About National Mission on Interdisciplinary Cyber Physical Systems:

- The Mission addresses the ever increasing technological requirements of the society, and takes into account the international trends and road maps of leading countries for the next generation technologies.
- The mission implementation would develop and bring:

Cyber Physical Systems (CPS) and associated technologies within reach in the country, adoption of CPS technologies to address India specific National / Regional issues, produce Next Generation skilled manpower in CPS, catalyze Translational Research, accelerate entrepreneurship and start-up ecosystem development in CPS, give impetus to advanced research in CPS, Technology development and higher education in Science, Technology and Engineering disciplines, and place India at par with other advanced countries and derive several direct and indirect benefits.

Implementation strategy:

- The NM-ICPS is a comprehensive Mission which would address technology development, application development, human resource development & skill enhancement, entrepreneurship and start-up development in CPS and associated technologies.
- The Mission aims at establishment of 15 numbers of Technology Innovation Hubs (TIH), six numbers of Application Innovation Hubs (AIH) and four numbers of Technology Translation Research Parks (TTRP).
- These Hubs & TTRPs will connect to Academics, Industry, Central

Ministries and State Government in developing solutions at reputed academic, R&D and other organizations across the country in a hub and spoke model.

- A strategic approach involving a suitable mix of Academic, Industry and Government is proposed to be adopted. Strong Steering and Monitoring Mechanisms in the form of Mission Governing Board (MGB), Inter-Ministerial Coordination Committee (IMCC), Scientific Advisory Committee (SAC) and other Sub-Committees will guide and monitor the Mission implementation.
- The Hubs & TTRPs have four focused areas along which the Mission implementation would proceed, namely (i) Technology Development; (ii) HRD & Skill Development; (iii) Innovation, Entrepreneurship & Start-ups Ecosystem Development; (iv) International Collaborations.

Impact:

- CPS technologies provide a cutting edge to a Nation's scientific, engineering, and technological innovative capabilities;
- support other missions of the government, provide industrial and economic competitiveness and have truly become a Strategic Resource. Volume, scale and complexity of emerging applications demand continued evolution of new technologies for the foreseeable future.
- The proposed Mission would act as an engine of growth that would benefit national initiatives in health, education, energy, environment, agriculture, strategic cum security, and industrial sectors, Industry 4.0, SMART Cities, Sustainable Development Goals (SDGs) etc. CPS is an integrated system of upcoming technology, which in turn is being taken up on priority basis by countries in the race for development.
- CPS will indeed bring a paradigm shift in entire skill sets requirement. The job opportunities will be enhanced through the Mission by imparting advanced skills and generating skilled manpower as per the requirement of the industry/ society. As Innovation, Entrepreneurship and Start-up Ecosystem is an integral part of the proposed NM-ICPS, the start-ups will also create a number of technology driven job opportunities in CPS and allied areas.
- Accordingly, it is estimated that, about 40,000 jobs will be created in the short term and about 2,00,000 in long term.

Benefits:

- The Mission will feed the Central Ministries/ Departments and State Govts and also the Industry to effectively use the CPS technologies in their projects and schemes for the benefit of the society. States/districts covered:
- NM-ICPS is a Pan India Mission and covers entire gamut of India that includes Central Ministries, State Governments, Industry and Academia.

Background:

- CPS and its associated technologies, like Artificial Intelligence (AI), Internet of Things (IoT), Machine Learning (ML), Deep Learning (DP), Big Data Analytics, Robotics, Quantum Computing, Quantum Communication, Quantum encryption (Quantum Key Distribution), Data Science & Predictive analytics, Cyber Security for physical infrastructure and other infrastructure, have pervaded and is playing a transformative role in almost every field of human endeavour all most in all sectors.
- It has become imperative for government and industries to be prepared to adopt these emerging and disruptive technologies in order to remain competitive, drive societal progress, generate employment, foster economic growth and to improve the overall quality of life and sustainability of the environment.

About Indian Science Congress:

- Indian Science Congress Association (ISCA) is a premier scientific organisation of India with headquarters at Kolkata, West Bengal.
- The association started in the year 1914 in Kolkata and it meets annually in the first week of January. It has a membership of more than 30,000 scientists.

Objectives:

The Association was formed with the following objectives :

- To advance and promote the cause of science in India;
- To hold an annual congress at a suitable place in India;
- To publish such proceedings, journals, transactions and other publications as may be considered desirable;

- To secure and manage funds and endowments for the promotion of Science including the rights of disposing of or selling all or any portion of the properties of the Association;
 - To do and perform any or all other acts, matters and things as are conducive to, or incidental to, or necessary for, the above objects.
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Bhoomi Rashi Portal

Why in news?

The Ministry of Road Transport & Highways has recently launched the BhoomiRashi portal.

About Bhoomi Rashi Portal:

- The Ministry of Road Transport and Highways, Govt. of India has designed Bhoomi Rashi as a single point platform for online processing of land acquisition notifications to accelerate highway infrastructure development projects in India.
- Bhoomi Rashi will fast track the process of land acquisition and result in greater benefits for all stakeholders. Farmers, landowners, contractors and investors will benefit from the transparency introduced by the portal in the land acquisition process.
- The Bhoomi Rashi portal will be a new milestone in the nation's journey towards DIGITISATION and TRANSPARENCY.

Present Bottlenecks in manual procedure of Land Acquisition

- Parking of huge Government funds with CALAs
- Mismatch or Errors in entries like Survey Numbers, Village Name, name of CALA etc.
- Physical movement/processing of draft Notifications for their publication in the Gazette of India-Extra Ordinary, resulting in delay.
- Multiple Entries of Land Parties by CALA at every subsequent stage

- Non transparency in determination and disbursal of compensation.

Bhoomi Rashi The Solution

- The need of the hour was workflow based automation of the present Land Acquisition process for NH projects . Development and operationalization of a comprehensive web-based portal was the answer.
 - This portal would enhance the efficiency of the land acquisition process, ensure transparency and accountability, and result in e-transfer of benefits directly to the accounts of the beneficiaries.
 - Its benefits would be faster process completion, transparent fund transfer to the land owners/beneficiaries and reduction of procedural errors.
 - With the operation of this Portal, the land acquisition process has been expedited significantly, become error-free and more transparent and the notifications at every stage are being processed on real time basis.
 - While the physical processing of the cases usually took considerable time, ranging from weeks to even months, and there were errors whose rectification caused further delays, the processing time using this portal has been reduced to less than two weeks in a majority of cases and even a few days in some cases.
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India-Myanmar-Thailand Trilateral Highway

Why in news?

Recently MoS, Road Transport & Highways has given importance of India-Myanmar-Thailand Trilateral Highway in Lok Sabha.

About India-Myanmar-Thailand Trilateral Highway:

- The India-Myanmar-Thailand Trilateral Highway is a highway under construction under India's Act East policy that will connect Moreh, India with Mae Sot, Thailand via Myanmar.
- The road is expected to boost trade and commerce in the

ASEAN-India Free Trade Area, as well as with the rest of Southeast Asia. India has also proposed extending the highway to Cambodia, Laos and Vietnam.

- The proposed approx 3,200 km route from India to Vietnam is known as the East-West Economic Corridor (Thailand to Cambodia and Vietnam became operational in 2015).
- This highway will also connect to the river ports being developed along the way at Kale (also called Kalembo) and Monywa on Chindwin River.
- India and ASEAN have plans to extend this route to Laos, Cambodia and Vietnam as this connectivity will generate annually, an estimated US\$70 billion in incremental GDP and 20 million in incremental aggregate employment by 2025, and India has offered US\$1 billion line-of-credit for the India-ASEAN connectivity projects.

