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What does the Indian scientific world expect?

- Today, Indian scientists are actively involved in everything from basic research to applied technology and achieving world-class research. Chandrayaan-3, Aditya L1, Gaganyaan, Pushpak Spacecraft stand testimony to that.
- Indian science needs to innovate itself to face challenges like climate change, Industry 4.0 etc

Deficiencies:

- In 2011-12, 0.76% of the Gross Domestic Product (GDP) was allocated to science and technology research.
- Despite several announcements made in every subsequent budget, it was just 0.64% in 2020-21.
- Comparatively China allocates 2.4% and Brazil 1.3% of funds.
- There is a lack of research personnel in higher education institutions and they also need to train and develop them.
- In India in 2009, 164 people per 10 lakh people were engaged in science and technology research.
- This number almost doubled to 262 in 2020.
- Over the same period in China, the number rose from 863 in 2009 to 1,585 in 2020.

Status of Higher Education Institutions:

- Although there are about 40,000 higher education institutions in India, very few of them have the facility to engage in research.
- Jawaharlal Nehru University is ranked first among more than 400 universities, according to the London-based QS rankings.
- But there are many problems faced by this university in the last few years like financial crisis and the crisis of university democracy.
- Many higher education institutions in India are also facing similar problems.

Stagnation in research studies:

- In 2019, the government decided to change the arrangement of providing research funding through various organizations and institutions in India and to implement research projects through a single organization called the Anusandhan National Research Foundation (ANRF).
- Budget 2021 has announced an allocation of Rs 50,000 crore over the next five years.
- But no administrative action has been taken for it and there is no announcement about it in next year's budget. A mere Rs 2,000 crore has been allocated in 2023.
- While the scheme has not taken full shape and started functioning, there has been a lag in the implementation of research projects over the past few years.

How to recover?

- Only 3.7% of research papers published in journals in 2012 were contributed by Indian researchers; This will rise to 6.2% in 2022, making it the world's fourth largest publisher of research articles. However, we are lagging behind when compared to the USA (13.7%) and China (26.9%).
- And while the numbers have increased, their quality has declined. 2017 to 2021. Only 15% of India's research has received citations in these top journals.
- In this case, the next government must ensure higher education with expanded research facilities, increase necessary funding, scientific employment, and create an environment of freedom of thought without threats.