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R&D Statistics and Indicators 2019-20

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Why in News

According to the Research & Development (R&D) Statistics and Indicators 2019-20 report, India's gross expenditure in R&D has tripled between 2008 & 2018 and scientific publications have risen placing the country internationally among the top few.

- The R&D Statistics and Indicators 2019-20 is based on the **national S&T survey 2018** brought out by the **National Science and Technology Management Information (NSTMIS)**.
- The report on R&D indicators for the nation is an **important document for the**
 - Evidence-based policymaking and planning in higher education,
 - R&D activities and support,
 - Intellectual property,
 - Industrial competitiveness.

Key Findings of the Report

- According to the report, **R&D is driven mainly by the government sector.**
- **Expenditure on R&D:**
 - The **Gross Expenditure on R&D (GERD)** of India **nearly tripled** between 2007-08 to 2017-18.
 - India's **per capita R&D expenditure** has also increased by **1.5 times**.
 - Increase in **Extramural R&D support** by central Science & Technology agencies.
 - **Women participation** in extramural R&D projects has also increased significantly to 24% in 2016-17 from 13% in 2000-01.
 - These **extramural expenditures** are the expenditures on R&D that is performed abroad but financed by domestic institutions.
 - **India spent 0.7% of its GDP on R&D in 2017-18**, While the same among other developing **BRICS countries** was Brazil 1.3%, Russian Federation 1.1%, China 2.1% and South Africa 0.8%.

- **Researchers and scientific publications:**
 - The **number of researchers** per million populations **has doubled** since 2000.
 - India occupies 3rd rank in terms of number of **Ph.D awarded in Science and Engineering** (S&E) after USA and China.
 - India is placed **3rd among countries in scientific publication** as per NSF database.
- **Patent filing:**

India is ranked at **9th position in terms of Resident Patent Filing** activity in the world.

 - During 2017-18 out of total patents filed in India, 32% patents were filed by Indian residents.
 - Patent applications filed in India are dominated by disciplines like Mechanical, Chemical, Computer/Electronics, and Communication.
- According to the **World Intellectual Property Organisation (WIPO)**, India's Patent Office stands at the **7th position** among the top 10 Patent Filing Offices in the world.

National Science and Technology Management Information

- The National Science and Technology Management Information System (NSTMIS) is a **division of the Department of Science and Technology (DST)**.
- It has been entrusted with the task of building the information base on a continuous basis on resources devoted to scientific and technological activities for policy planning in the country.

Source: PIB