

**GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
LOK SABHA  
UNSTARRED QUESTION NO.4453  
TO BE ANSWERED ON 20/03/2020**

**RESEARCH AND DEVELOPMENT**

**4453. SHRI M. BADRUDDIN AJMAL:**

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान और प्रौद्योगिकी मंत्री

be pleased to state:

- (a) whether India's spending on Research and Development (R&D) is less as compared to other developing countries and if so, the reaction of the Government thereto;
- (b) whether Government has increased the funds for investment in R&D in the country and if so, the details thereof along with the comparative figures during the last three years;
- (c) whether it is a fact that the number of scientists per million people in India is lower as compared to other Asian countries;
- (d) if so, the details thereof along with steps being taken to encourage scientific research activities in the country; and
- (e) the number of patent for new innovations granted to Indian scientists during each of the last three years

**ANSWER**

**MINISTER OF SCIENCE AND TECHNOLOGY, MINISTER OF EARTH SCIENCES AND  
MINISTER OF HEALTH AND FAMILY WELFARE  
(DR. HARSH VARDHAN)**

स्वास्थ्य और परिवार कल्याण मंत्री; विज्ञान और प्रौद्योगिकी मंत्री; और पृथ्वी विज्ञान मंत्री  
(डॉ. हर्ष वर्धन)

(a) As per the latest available statistics, India's spending on Research and Development (R&D) is consistently increasing and has nearly tripled from Rs. 39,437.77 crore in 2007-08 to Rs. 1,13,825.03 crore in 2017-18. India is ranked among the top 10 countries of the world in R&D investment in terms of US\$ Purchasing Power Parity (PPP).

(b) Yes, Sir. The Government has consistently increased the allocation of funds for investment in R&D in the country. The progressive expenditure for six Major Scientific Agencies for the last three years is as under:

( in Rs. Crore)			
Agencies	2017-18	2018-19#	2019-20*
Department of Science & Technology (DST)	4595.73	4912.54	5480.93
Department of Scientific & Industrial Research/ Council of Scientific Research (DSIR/CSIR)	4618.83	4548.78	4883.24
Department of Bio-Technology (DBT)	2331.42	2379.10	2381.10
Department of Space (DOS)	9127.16	11188.37	13139.26
Department of Atomic Energy (R&D Sector)	5786.35	5715.54	6502.80
Ministry of Earth Sciences (MoES)	1541.47	1726.10	1809.70
<b>Total</b>	<b>28000.96</b>	<b>30470.43</b>	<b>34197.03</b>

Source: Demands for Grants of Central Government, Expenditure Budget, GoI (various years)

Note: # - Budget Estimate ; \*- Estimated

(c) & (d): As per the latest available UNESCO S&T Statistics, the number of research scientists per million people in India is lower than countries such as Korea, Japan, Singapore, Malaysia and China but higher than Indonesia, Philippines, Sri Lanka etc. in Asia. Details of Asian countries in terms of number of research scientists per million people is Annexed.

The Government has taken various steps to encourage scientific research activities in the country such as successive increase in plan allocations for scientific departments, setting up of new institutions for science, education and research, creation of Centres of Excellence and facilities in emerging and frontline areas of S&T in academic and national institutions, operation of schemes such as Fund for Improvement of Science and Technology Infrastructure (FIST); Sophisticated Analytical Instrument Facilities (SAIF), Visiting Advanced Joint Research (VAJRA) Faculty Scheme for distinguished overseas scientists and academicians including Non-Resident Indians (NRIs) and Overseas Citizens of India (OCIs), Overseas Visiting Doctoral Fellowship (OVDF), Prime Minister's research fellowships, Teacher Associate-ship for Research Excellence (TARE) and Distinguished Investigator Award (DIA), Department of Bio-Technology-The World Academy of Sciences (DBT-TWAS) International fellowships and providing substantial grant to potential scientists through extramural research funding etc.

(e) The number of patent for new innovations granted to Indian scientists at Indian Patent Office (IPO) during each of the last three years is as under:

Patent granted	2015-16	2016-17	2017-18
	5408	8532	1937

Source: Annual Report(s) of the Controller General of Patents, Design and Trade Marks

**ANNEXURE****Scientists/Researchers per Million People in Asian countries**

<b>Country</b>	<b>Researchers Per Million Population</b>	<b>Reference Year</b>
<b>Republic of Korea</b>	<b>7498</b>	<b>2017</b>
<b>Japan</b>	<b>5304</b>	<b>2017</b>
<b>Singapore</b>	<b>2795</b>	<b>2017</b>
<b>Malaysia</b>	<b>2396</b>	<b>2016</b>
<b>United Arab Emirates</b>	<b>2379</b>	<b>2016</b>
<b>Iran</b>	<b>1475</b>	<b>2017</b>
<b>Thailand</b>	<b>1379</b>	<b>2017</b>
<b>China</b>	<b>1225</b>	<b>2017</b>
<b>Vietnam</b>	<b>708</b>	<b>2017</b>
<b>Kazakhstan</b>	<b>667</b>	<b>2018</b>
<b>Jordan</b>	<b>596</b>	<b>2017</b>
<b>Qatar</b>	<b>584</b>	<b>2015</b>
<b>Kuwait</b>	<b>514</b>	<b>2018</b>
<b>Uzbekistan</b>	<b>476</b>	<b>2018</b>
<b>Bahrain</b>	<b>369</b>	<b>2014</b>
<b>Pakistan</b>	<b>336</b>	<b>2017</b>
<b>India</b>	<b>255</b>	<b>2017</b>
<b>Oman</b>	<b>236</b>	<b>2018</b>
<b>Indonesia</b>	<b>216</b>	<b>2018</b>
<b>Iraq</b>	<b>106</b>	<b>2017</b>
<b>Philippines</b>	<b>106</b>	<b>2015</b>
<b>Sri Lanka</b>	<b>106</b>	<b>2015</b>
<b>Cambodia</b>	<b>30</b>	<b>2015</b>

Source: 1. Data extracted on March 17, 2020 from UIS Statistics  
2. Research & Development Statistics 201920, DST, GoI.

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