



REPORT NO.

329

PARLIAMENT OF INDIA RAJYA SABHA

DEPARTMENT-RELATED PARLIAMENTARY STANDING COMMITTEE
ON SCIENCE AND TECHNOLOGY, ENVIRONMENT, FORESTS AND
CLIMATE CHANGE

THREE HUNDRED TWENTY NINTH REPORT
DEMANDS FOR GRANTS (2020-2021) OF THE
DEPARTMENT OF SCIENCE AND TECHNOLOGY
(DEMAND NO. 87)

(Presented to the Rajya Sabha on 6th March, 2020)
(Laid on the Table of Lok Sabha on 6th March, 2020)



Rajya Sabha Secretariat, New Delhi
March, 2020/ Phalguna, 1941 (Saka)

**Website : <http://rajyasabha.nic.in>
Email: rsc-st@sansad.nic.in**

**PARLIAMENT OF INDIA
RAJYA SABHA**

**DEPARTMENT-RELATED PARLIAMENTARY STANDING COMMITTEE ON SCIENCE
AND TECHNOLOGY, ENVIRONMENT, FORESTS AND CLIMATE CHANGE**

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CONTENTS

	PAGES
1. COMPOSITION OF THE COMMITTEE	(i)
2. INTRODUCTION	(ii)
3. ACRONYMS	(iii)
4. REPORT	1-6
5. RECOMMENDATIONS/OBSERVATIONS-----AT A GLANCE	7-8
6. MINUTES	9-14

COMPOSITION OF THE COMMITTEE

(2019-20)

(Constituted on 13th September, 2019)

1. Shri Jairam Ramesh -- **Chairman**

RAJYA SABHA

2. Shri Anil Baluni
3. Shri R.S. Bharathi
4. Shrimati Vandana Chavan
5. Shri Hishey Lachungpa
6. Shri Parimal Nathwani
7. Shri Bhaskar Rao Nekkanti
8. Shri Ashwini Vaishnav
9. Shri Ravi Prakash Verma
10. Shri Binoy Viswam

LOK SABHA

11. Shri Guharam Ajgalley
12. Shri Pradan Baruah
13. Shri E.T. Mohammed Basheer
14. Shri Jashvantsinh Sumanbhai Bhabhor
15. Shri Sudarshan Bhagat
16. Shri Rameshbhai Lavjibhai Dhaduk
17. Shri Anantkumar Hegde
18. Shrimati Jyotsna Charandas Mahant
19. Dr. Swami Sakshiji Maharaj
20. Shri Asaduddin Owaisi
21. Shri S.R. Parthiban
22. Dr. Ranjan Singh Rajkumar
23. Shri Kotha Prabhakar Reddy
24. Dr. Jayanta Kumar Roy
25. Shrimati Satabdi Roy (Banerjee)
26. Shri Mahesh Sahoo
27. Shri Francisco Cosme Sardinha
28. Shri Anurag Sharma
29. Shri Ram Shiromani
30. Shri Kirti Vardhan Singh
31. Dr. Ramapati Ram Tripathi

SECRETARIAT

Smt. Sunita Sekaran, Joint Secretary
Shri T. N. Pandey, Director
Shri S. Rangarajan, Additional Director
Shri Rajiv Saxena, Under Secretary
Shri Harish Kumar, Committee Officer
Shri Ankit Chansoria, Assistant Committee Officer

ACRONYMS

BE	Budget Estimate
DST	Department of Science and Technology
HRNTDB	Generation of High Resolution National Topographic Data Base
INSPIRE	Innovation in Science Pursuit for Inspired Research
ITDD	Innovation Technology Development and Deployment
MTEF	Medium Term Expenditure Framework
NATMO	National Atlas and Thematic Mapping Organization
NIDHI	National Initiative of Developing and Harnessing Innovations
NM-ICPS	National Mission on Interdisciplinary Cyber Physical System
NM-QTA	National Mission on Quantum Technologies and Applications
R&D	Research and Development
RE	Revised Estimate
S&T	Centre-State Science & Technology
SATHI	Sophisticated Analytical and Technical Help Institute
SC	Scheduled Caste
SERB	Science & Engineering Research Board
SME	Small and Medium Enterprise
ST	Scheduled Tribe
SUPRA	Scientific and Useful Profound Research Advancement
TBIs	Technology Business Incubators
TDB	Technology Development Board

INTRODUCTION

I, the Chairman of the Department-related Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change, having been authorised by the Committee to present the Report on its behalf, present this Three Hundred Twenty Ninth Report of the Committee. This Report deals with the detailed Demands for Grants (2020-2021) of the Department of Science and Technology (Demand No. 87).

2. In the meeting of the Committee held on the 17th February, 2020, the Secretary and other officers of the Department of Science and Technology gave an overview of the various activities of the Department and the Members sought clarifications on various aspects of the performance of the Department to enable it to scrutinise the Demands for Grants.

3. The Committee expresses its thanks to the officers of the Department for replying to the clarifications sought by the Members and placing before it the required material to enable it to scrutinise the Demands for Grants of the Department of Science and Technology.

4. The Committee considered and adopted the draft Report in its meeting held on the 4th March, 2020.

NEW DELHI;
March 4, 2020
Phalguna 14, 1941 (Saka)

(JAIRAM RAMESH)
Chairman,
Department-related Parliamentary Standing Committee on
Science and Technology, Environment, Forests and Climate Change,
Rajya Sabha.

REPORT

1. The detailed Demands for Grants of the Department of Science and Technology for the year 2020-2021 was considered by the Department-related Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change in its meeting held on the 17th February, 2020.

2. BUDGETARY DETAILS FOR THE FINANCIAL YEAR 2019-20 AND ALLOCATION FOR 2020-21

2.1. The following table gives the details of the B.E., R.E. and actual expenditure of the Department in 2019-20 and budgetary allocations made to the Department for B.E. 2020-21:

Sl. No	PARTICULARS	2019-20 (Rupees in crore)			Budget Estimates for FY 2020-21 (Rupees in crore)
		B.E.	R.E.	Actual* (till 31.01.20 20)	
1	SECRETARIAT	158.45	118.45	70.62	141.96
2	SURVEY OF INDIA	416.16	455.56	340.64	453.42
3	NATMO	25.75	27.25	18.37	42.25
4	AUTONOMOUS INSTITUTIONS & PROFESSIONAL BODIES	1182.70	1217.70	1011.23	1357.00
5	SCIENCE AND ENGINEERING RESEARCH BOARD	1000.00	956.57	630.50	1000.00
6	SCIENCE AND TECHNOLOGY INSTITUTIONAL AND HUMAN CAPACITY BUILDING	1100.20	1091.30	952.04	1169.50
7	RESEARCH AND DEVELOPMENT	611.00	589.00	513.85	718.00
8	INNOVATION, TECHNOLOGY DEVELOPMENT AND DEPLOYMENT	872.35	811.87	516.78	1050.65
9	NATIONAL MISSION ON INTERDISCIPLINARY CYBER PHYSICAL SYSTEM (NM- ICPS)	124.00	123.83	122.78	270.85
10	TECHNOLOGY DEVELOPMENT BOARD	100.00	100.00	63.00	100.00
11	SCIENCE COUNSELLORS ABROAD	9.50	9.50	7.57	10.00
GRAND TOTAL		5600.11	5501.03	4247.38	6313.63

2.2. The Committee observes that the Department received an additional allocation of Rs.812.60 crore for B.E. 2020-21 (at Rs.6313.63 crore) as compared to R.E. 2019-20 (at Rs.5501.03 crore). The Committee hopes that this increased allocation will enable the Department to undertake its new initiatives and schemes effectively and efficiently.

2.3. The following table highlights the shortfall in funds utilisation during 2019-20 and the percentage increased allocation for B.E. 2020-21 of some of the schemes/components under the same heads:

(Rupees in crore)				
Budgetary Head	R.E.2019-20	Actual Expenditure in 2019-20 (till 31.01.2020)	Shortfall in Expenditure 2019-20 (% of R.E 2019-20)	% increased allocation (B.E. 2020-21 compared to R.E. 2019-20)
Secretariat	118.45	70.62	40.38 %	19.84 %
NATMO	27.25	18.37	32.59 %	55.04 %
Innovation, Technology Development and Deployment	811.87	516.78	36.35 %	29.41 %

2.4. The Committee observes that under the Non-scheme budgetary heads Secretariat and NATMO (National Atlas and Thematic Mapping Organization) and scheme head Innovation, Technology Development and Deployment (ITDD), the Department has not been able to utilise the allocated funds efficiently as there is a utilisation shortfall of 40.38 percent, 32.59 percent and 36.35 percent of R.E. 2019-20 respectively (till 31.01.2020). The Committee further notes that under the same heads, Secretariat, NATMO and ITDD, the B.E. 2020-21 allocations have increased by 19.84 percent, 55.04 percent and 29.41 percent as compared to R.E. 2019-20 respectively. The Committee highlights the fact that there is an increased budgetary allocation for B.E. 2020-21 as compared to R.E. 2019-20 under these heads even though the Department has not been able to utilise the R.E. 2019-20 allocations under these heads efficiently.

2.5. The Committee recommends the Department to ensure full utilisation of funds, especially under the heads Secretariat, NATMO and Innovation, Technology and Development, for the increased budgetary allocation in B.E. 2020-21.

2.6. The Committee enquired from the Department about the impact of the difference in the budgetary allocations for 2020-21 demanded by the Department as compared to actual allocations made for 2020-21. The Department informed the Committee that the shortfall of Rs.486 crore might have impact on some of the key programmes being implemented including the umbrella schemes Research and Development (additional requirement of Rs.156 crore) and Innovation, Technology Development and Deployment (additional requirement of Rs.30 crore). The Committee was informed that this shortfall would also affect research activities under Science & Engineering Research Board (SERB) (additional requirement of Rs.200 crore) and payment of salary arrears to the employees of Autonomous Institutions (additional requirement of Rs.100 crore). The representatives of the Department, in the meeting, informed that their budget is not stressed, and shall not negatively impact the initiatives and programmes of the Department.

2.7. The Committee, therefore, recommends the Department to utilise its increased budgetary allocation with prudence, prioritise its activities and optimise the available resources to support critical projects under different schemes and sub-schemes. The Committee also recommends the Ministry of Finance to grant additional funds to the Department at the supplementary stage so that the Department may sustain its different programmes without having any adverse impact on ongoing schemes/projects.

2.8. During the meeting of the Committee for the consideration of the Demands for Grants held on the 17th February 2020, it was informed by the Department that there is a need to enhance the Medium Term Expenditure Framework (MTEF) allocations of the Department to cater to the needs of the Department. The Committee, therefore, recommends the Department to pursue the Ministry of Finance and revise the MTEF to a higher base level, thereby increasing the resource availability for the Department to carry out its new initiatives and future plans.

3. BUDGET ALLOCATION FOR SCHEMES AND OTHER INITIATIVES

3. The following table gives the details of the budgetary allocation for the various schemes and initiatives of the Department for R.E. 2019-20 and B.E. 2020-21

(Rupees in crore)

Sl. No.	FOCUS SECTORS	R.E. 2019-20 allocations & utilization* %	B.E. 2020-21 allocations	% increase
1.	SCIENCE AND TECHNOLOGY INSTITUTIONAL AND HUMAN CAPACITY BUILDING	1091.30 (87.24%)	1169.50	7.17
2.	INNOVATION, TECHNOLOGY DEVELOPMENT AND DEPLOYMENT	811.87 (63.65%)	1050.65	29.41
3.	RESEARCH AND DEVELOPMENT	589.00 (87.24%)	718.00	21.90
4.	SCIENCE AND ENGINEERING RESEARCH BOARD	956.57 (65.91%)	1000.00	4.54
5.	TECHNOLOGY DEVELOPMENT BOARD	100.00 (63.00%)	100.00	No increase
6.	NATIONAL MISSION ON INTERDISCIPLINARY CYBER PHYSICAL SYSTEM (NM- ICPS)	123.83 (99.15%)	270.85	118.73

* Till 31.01.2020

4. The Committee was informed that the Department runs three umbrella schemes. These are:

4.1. **Science and Technology Institutional and Human Capacity Building:** The Department implements the 'Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions' (FIST), Promotion of University Research and Scientific Excellence (PURSE), Sophisticated Analytical Instrument Facilities (SAIF) and Sophisticated Analytical and Technical Help Institute (SATHI) schemes for the development of R&D infrastructure. The Department has been playing a proactive role in addressing Centre-State S&T cooperation through State S&T Programme (SSTP). In addition, the Department implements the Knowledge Involvement in Research Advancement through Nurturing (KIRAN) scheme to bring gender parity in S&T and Innovation in Science Pursuit for Inspired Research (INSPIRE) scheme for the young population of the country. It aims to impart to them the excitements of creative pursuit of science and attract the meritorious students.

4.1.1. The Committee observes that the Department has been able to achieve most of its targets during the years 2018-19 and 2019-20. However, according to the information given by the Department, the target for enrolling school students for INSPIRE Award Manak Scheme was

about 3 lakh, whereas the Department could enroll only 2.34 lakh students till 31.01.2020. Similarly, the target set by the Department to provide internship to students in science camps was about 1 lakh, whereas the Department could only enroll about 70,000 students. The Committee, therefore, expresses its concern on not achieving of these important targets and recommends the Department to take necessary measures to achieve these targets by the end of FY 2019-20.

4.2. **Innovation, Technology Development and Deployment:** The Technology Development Programmes (TDP) aims to convert proof-of-concepts for technologies into advance prototypes for validation and demonstration in field settings. This scheme comprises of the Technology Missions Division, Natural Resources Data Management Systems (NRDMS), National Science & Technology Entrepreneurship Development Board (NSTEDB) and National Council for Science & Technology Communication (NCSTC) amongst others.

4.2.1. **The Committee observes that the Department has been able to achieve most of its targets under the above scheme during the years 2017-18, 2018-19 and 2019-20.**

4.3. **Research and Development:** This umbrella scheme includes the programmes International Cooperation, Nano Science and Technology, Mega Facility for Basic Sciences, Climate Change Programme, National Supercomputing Mission, and Technology Fusion Application Research.

4.3.1. **The Committee was informed that an aggregate amount of Rs.1711 crore has been spent during 2019-20 by the Department, under various R&D related activities. The Department further informed that more than 50% of the total DST grants are finally spent in the private sector. The Committee recommends that the Department relook its policies and consider a higher direct allocation to the private sector with respect to Research and Development.**

4.3.2. During the meeting, the Committee was informed that the withdrawal of tax incentive on R&D as well as the exemptions on the funds spent on acquiring patents by the private sector, has negatively affected R&D investment in the private sector in India. The Committee observes that **this weighted tax deduction scheme, in existence for the last three decades, had stimulated R&D spending by private companies/entities registered with DST. The Committee would like the department to carry out an immediate assessment of the impact of the tax incentive under the Income Tax Act, 1961, and apprise the Committee of its analysis.**

4.3.3. The Committee was informed that the Department runs exclusive programmes for the SC/ST categories, Women and Children under the umbrella schemes and has a separate budgetary allocation for the same. An exclusive allocation of 8.3 percent and 4.3 percent of the budgetary allocation, as decided by the Department of Economic Affairs, is allocated towards the Schedule Caste Sub-Plan and Tribal Sub-Plan respectively.

4.4. **The Committee observed that the Department has an expenditure shortfall of 25 percent to 40 percent of the budget allocated in six of the eleven budgetary heads. This includes heads related to establishment expenditure as well as umbrella schemes of the Department. The Committee, therefore, expresses concern with the Department's financial efficiency and planning. The Committee, therefore, recommends the Department to implement a better internal monitoring mechanism to ensure financial prudence and maximum utilisation of allocated funds.**

4.5. **The Committee expresses its satisfaction over the increased budgetary allocation for B.E. 2020-21 over R.E. 2019-20 especially under Innovation, Technology Development and Deployment (29.41 percent increase), Research and Development (21.90 percent increase) and NM-ICPS (118.73 percent increase).**

4.6. **The Committee realises the need for promoting cutting edge research in the areas of artificial intelligence, machine learning, data analysis, robotics and automation, cyber security,**

precision electronics, cybernetics, and quantum computing. The Committee hopes that the progress in the above mentioned critical areas would be accelerated with the implementation of NM-ICPS and NM-QTA. The Committee recommends the Department to set up such administrative and financial mechanisms so that the private sector, especially start-ups and SMEs can integrate seamlessly, at various stages, with the Department in the execution of these missions.

5. TECHNOLOGY DEVELOPMENT BOARD

5.1. The Committee was informed that the Technology Development Board (TDB) is a statutory body of Department of Science & Technology established by Government of India to promote technology development in the country by bringing together the efforts of the industry and R&D institutions for achieving integrated excellence. TDB provides financial assistance by way of loan (upto 50% of total project cost @ 5% simple interest), equity (upto 25% of the total project cost) or grant (in exceptional cases).

5.2. The Committee was informed that apart from the allocated budget, TDB also raises funds from its internal resources. In the last five years, TDB steadily increased its budget allocation and disbursements as shown in the table below:

(Rupees in crore)

Year	Allocation (Grant in aid from DST)	Disbursement towards Projects
2015-16	30.00	68.85
2016-17	30.30	110.68
2017-18	170.00	224.64
2018-19	100.00	168.12
2019-20	63.00*	101.21**(upto 31 st Jan, 2020)

*TDB has been sanctioned a budget of Rs 100 crore out of which, Rs 63.00 crore has already been allocated.

** In addition to already expended 101.21 crore, TDB's estimated expenditure for next two months is around 96 crore.

5.3. The Committee, during its meeting with the representatives of the Department, remarked that **the statutory nature of TDB has constrained the entity in disbursement of funds, acquiring equity and augmenting financial resources. The Committee also noted managerial issues with TDB, thereby rendering the on-ground impact unsatisfactory.**

5.4. **The Committee, therefore, recommends that the Department must immediately analyse the issues with the structure and functioning of TDB and re-structure the administrative and financial framework with a fresh approach ensuring enhanced and seamless collaboration with the private sector. The Committee also recommends that the Department should look into the possibility of amending the relevant act and establishing TDB as a Section 8 company on the lines of Biotechnology Industry Research Assistance Council (BIRAC), an entity started by the Department of Biotechnology.**

6. NURTURING ENTREPRENEURSHIP IN SCIENCE AND TECHNOLOGY

6.1. The Committee was informed that in the year 2016, the Department had initiated a major programme titled “National Initiative of Developing and Harnessing Innovations (NIDHI)” to nurture entrepreneurship in science and technology. NIDHI caters to S&T innovation value chain by nurturing and scaling up innovative technology-based innovators and start-ups by providing a range of financial support.

6.2. In last five years, 60 new Technology Business Incubators (TBIs) have been set up with combined area of 9 lakh sq. ft. and capacity to physically incubate over 1000 startups annually. During the five-year period, 3512 startups have successfully graduated from TBIs. 4800 startups are currently tenants under 150 DST supported TBIs all over the country. About Rs.115 crore has been given as seed and acceleration support to 870 startups.

6.3. The Committee was informed that the budgetary allocation for NIDHI has increased more than four times from Rs.44.00 crore in 2014-2015 to Rs.192.00 crore in 2019-20. During the meeting, the Department was urged by the Committee to significantly improve its performance with respect to support to start-ups and entrepreneurs, development and commercialisation of technologies relevant to the Indian needs.

6.4. The Committee, therefore, recommends the Department to analyse the hurdles, especially with respect to programmes oriented towards extending support to start-ups and entrepreneurs and commercialisation of technologies most relevant to the Indian needs.

7. FIVE MAJOR INITIATIVES OF THE DEPARTMENT FOR THE YEAR 2020-21

7.1. During the meeting of the Committee, the Department was asked to furnish details of five major programmes that the Department will pursue during the year 2020-21. The Department listed the following five initiatives along with the respective targets for 2020-21:

- a) **National Mission On Interdisciplinary Cyber-Physical Systems (NM-ICPS):** The Mission aims to establish 25 hubs, across the country and will act as technology platform for translational research and product in the areas like Artificial Intelligence, Robotics, Sensors, Big Data Analytics.
- b) **Sophisticated Analytical & Technical Help Institutes (SATHI):** The Department aims to establish 3 SATHI centres at a cost of Rs.125 crore per centre will be established by next year.
- c) **VigyanJyoti:** It is a scheme to provide a ladder to sustain girl student’s career in science and technology domain with interventions at school to PhD / post doctoral level. Top performing girls in Science and Technology in about 50 districts will be covered by next year.
- d) **Generation of High Resolution National Topographic Data Base (HRNTDB):** The project aims to generate HRNTDB for 10 % of the country; to generate Ultra High Resolution Digital Elevation Model (DEM), of 50 cm resolution for at least 70,000 sq. km. area and Ultra high resolution image base map for at least 40,000 sq. km. area.
- e) **SERB-SUPRA:** Support around 20 projects based on disruptive and profound quality ideas to develop critical science and technologies at a total cost of around Rs.30 crore.

7.2. The Committee takes note of the above-mentioned initiatives and their respective targets set by the Department. The Committee recommends the Department to develop frameworks that enable better convergence between academia, industry and government, for all the above programmes and apprise the Committee of the same.

BUDGETARY DETAILS FOR THE FINANCIAL YEAR 2019-20 AND ALLOCATION FOR 2020-21

The Committee observes that the Department received an additional allocation of Rs.812.60 crore for B.E. 2020-21 (at Rs.6313.63 crore) as compared to R.E. 2019-20 (at Rs.5501.03 crore). The Committee hopes that this increased allocation will enable the Department to undertake its new initiatives and schemes effectively and efficiently. (Para 2.2)

The Committee recommends the Department to ensure full utilisation of funds, especially under the heads Secretariat, NATMO and Innovation, Technology and Development, for the increased budgetary allocation in B.E. 2020-21. (Para 2.5)

The Committee, therefore, recommends the Department to utilise its increased budgetary allocation with prudence, prioritise its activities and optimise the available resources to support critical projects under different schemes and sub-schemes. The Committee also recommends the Ministry of Finance to grant additional funds to the Department at the supplementary stage so that the Department may sustain its different programmes without having any adverse impact on ongoing schemes/projects. (Para 2.7)

During the meeting of the Committee for the consideration of the Demands for Grants held on the 17th February 2020, it was informed by the Department that there is a need to enhance the Medium Term Expenditure Framework (MTEF) allocations of the Department to cater to the needs of the Department. The Committee, therefore, recommends the Department to pursue the Ministry of Finance and revise the MTEF to a higher base level, thereby increasing the resource availability for the Department to carry out its new initiatives and future plans. (Para 2.8)

The Committee observes that the Department has been able to achieve most of its targets during the years 2018-19 and 2019-20. However, according to the information given by the Department, the target for enrolling school students for INSPIRE Award Manak Scheme was about 3 lakh, whereas the Department could enroll only 2.34 lakh students till 31.01.2020. Similarly, the target set by the Department to provide internship to students in science camps was about 1 lakh, whereas the Department could only enroll about 70,000 students. The Committee, therefore, expresses its concern on not achieving of these important targets and recommends the Department to take necessary measures to achieve these targets by the end of FY 2019-20. (Para 4.1.1)

The Committee observes that the Department has been able to achieve most of its targets under the above scheme during the years 2017-18, 2018-19 and 2019-20. (Para 4.2.1)

The Committee was informed that an aggregate amount of Rs.1711 crore has been spent during 2019-20 by the Department, under various R&D related activities. The Department further informed that more than 50% of the total DST grants are finally spent in the private sector. The Committee recommends that the Department relook its policies and consider a higher direct allocation to the private sector with respect to Research and Development. (Para 4.3.1)

The Committee observes that this weighted tax deduction scheme, in existence for the last three decades, had stimulated R&D spending by private companies/entities registered with DST. The Committee would like the department to carry out an immediate assessment of the impact of the tax incentive under the Income Tax Act, 1961, and apprise the Committee of its analysis. (Para 4.3.2)

The Committee observed that the Department has an expenditure shortfall of 25 percent to 40 percent of the budget allocated in six of the eleven budgetary heads. This includes heads related to establishment expenditure as well as umbrella schemes of the Department. The Committee, therefore, expresses concern with the Department's financial efficiency and planning. The Committee, therefore, recommends the Department to implement a better internal monitoring mechanism to ensure financial prudence and maximum utilisation of allocated funds.

(Para 4.4)

The Committee expresses its satisfaction over the increased budgetary allocation for B.E. 2020-21 over R.E. 2019-20 especially under Innovation, Technology Development and Deployment (29.41 percent increase), Research and Development (21.90 percent increase) and NM-ICPS (118.73 percent increase).

(Para 4.5)

The Committee realises the need for promoting cutting edge research in the areas of artificial intelligence, machine learning, data analysis, robotics and automation, cyber security, precision electronics, cybernetics, and quantum computing. The Committee hopes that the progress in the above mentioned critical areas would be accelerated with the implementation of NM-ICPS and NM-QTA. The Committee recommends the Department to set up such administrative and financial mechanisms so that the private sector, especially start-ups and SMEs can integrate seamlessly, at various stages, with the Department in the execution of these missions.

(Para 4.6)

TECHNOLOGY DEVELOPMENT BOARD

The statutory nature of TDB has constrained the entity in disbursement of funds, acquiring equity and augmenting financial resources. The Committee also noted managerial issues with TDB, thereby rendering the on-ground impact unsatisfactory.

(Para 5.3)

The Committee, therefore, recommends that the Department must immediately analyse the issues with the structure and functioning of TDB and re-structure the administrative and financial framework with a fresh approach ensuring enhanced and seamless collaboration with the private sector. The Committee also recommends that the Department should look into the possibility of amending the relevant act and establishing TDB as a Section 8 company on the lines of Biotechnology Industry Research Assistance Council (BIRAC), an entity started by the Department of Biotechnology.

(Para 5.4)

NURTURING ENTREPRENEURSHIP IN SCIENCE AND TECHNOLOGY

The Committee, therefore, recommends the Department to analyse the hurdles, especially with respect to programmes oriented towards extending support to start-ups and entrepreneurs and commercialisation of technologies most relevant to the Indian needs.

(Para 6.4)

FIVE MAJOR INITIATIVES OF THE DEPARTMENT FOR THE YEAR 2020-21

The Committee takes note of the above-mentioned initiatives and their respective targets set by the Department. The Committee recommends the Department to develop frameworks that enable better convergence between academia, industry and government, for all the above programmes and apprise the Committee of the same.

(Para 7.2)

MINUTES

IX
NINTH MEETING

The Committee met at 11:00 A.M. on Monday, the 17th February, 2020 in Committee Room No.4, Parliament House Annexe Extension, New Delhi.

MEMBERS PRESENT

1. Shri Jairam Ramesh - **Chairman**

RAJYA SABHA

2. Shri Ashwini Vaishnaw
3. Shri Ravi Prakash Verma

LOK SABHA

4. Shri Guharam Ajgalley
5. Shri E.T. Mohammed Basheer
6. Dr. Swami Sakshiji Maharaj
7. Dr. Ranjan Singh Rajkumar
8. Dr. Jayanta Kumar Roy
9. Shri Ram Shiromani
10. Dr. Ramapati Ram Tripathi

SECRETARIAT

Smt. Sunita Sekaran, Joint Secretary
Shri T.N. Pandey, Director
Shri S. Rangarajan, Additional Director
Shri Mohd. Salamuddin, Additional Director
Shri Rajiv Saxena, Under Secretary
Shri Harish Kumar, Committee Officer

Representatives of Department of Science & Technology

- (i) Prof. Ashutosh Sharma, Secretary
- (ii) Shri B. Anand, Additional Secretary & FA
- (iii) Ms. Anju Bhalla, Joint Secretary
- (iv) Prof. Sandeep Verma, Secretary, SERB
- (v) Shri Akhilesh Jha, CCA
- (vi) Dr. Akhilesh Gupta, Scientis 'G' & Head
- (vii) Dr. H.K. Mittal, Scientist 'G' & Head
- (viii) Dr. Neeraj Sharma, Scientist 'G' & Head
- (ix) Dr. Praveer Asthana, Scientist 'G' & Head
- (x) Dr. R. K. Tayal, Scientist 'G' & Head
- (xi) Dr. Praveen Arora, Scientist 'G' & Head
- (xii) Smt. Sadhana Relia, Scientist 'G' & Head
- (xiii) Ms. Ujjwala Tripti Tirkey, Scientist 'G' & Head
- (xiv) Dr. Debapriya Dutta, Scientist 'G' & Head

- (xv) Dr. K. R. Murali Mohan, Scientist 'G' & Head
- (xvi) Dr. P. S. Acharya, Scientist 'G' & Head
- (xvii) Dr. Sanjai Bajpai, Scientist 'G' & Head
- (xviii) Shri Milind R. Kulkarni, Scientist 'G' & Head
- (xix) Dr. Sanjay Kumar Mishra, Scientist 'G' & Head
- (xx) S. S. Kohli, Scientist 'G' & Head
- (xxi) Shri Sajid Mubashir, Scientist 'G'
- (xxii) Lt. Gen Girish Kumar, VSM (Retd.), Surveyor General of India

2. At the outset, the Chairman welcomed the Members of the Committee and the representatives of Department of Science and Technology (DST). The Chairman asked the Secretary to give a brief presentation on the Demands for Grants of the Department for 2020-21 and inform the Committee about the allocation requested by the Department for 2020-21; allocation actually made to the Department for the year; the potential impact of the shortfall on the current and proposed projects of the Department; and the minimum additional allocation required to sustain the key programmes of the Department during the current year and the strategy devised by the Department for dealing with situation arising out of reduced allocations.

3. Thereafter, the Secretary, Department of Science and Technology made a power point presentation before the Committee wherein the Committee was informed that the Department had made a demand of about Rs.8,500 crore for 2020-21 and they were actually allocated Rs.6,313 crore which is a shortfall of nearly Rs.2,190. The Committee was further informed that the Department had asked for about Rs.3,000 crore more compared to the allocation made in 2019-20 and had been allotted about Rs.800 crore more compared to previous year's allocation. The Secretary apprised the Committee the need to enhance the Medium-Term Expenditure Framework to expand the Department's budgetary allocations as per the guidelines of the Finance Commission. The Committee was informed about the new initiatives planned by the Department such as the National Quantum Technology Mission and the National Mission on Cyber-Physical Systems. The Secretary apprised the Committee that the Department has a dedicated corpus earmarked for promotion of science and technology amongst the Schedule Castes, Schedule Tribes and Women. The Committee was also informed of the various initiatives the Department plans to undertake to increase women participation in the field of science and technology. The Secretary, DST apprised the Committee that the additional demand in the allocations for 2020-21 was made keeping in view some of the international projects relating to particle physics and mega science and since these projects have been delayed, the Department is comfortable with the allocations made to the Department during the year.

4. The Chairman and Members then raised various queries and concerns such as the efficiency in funds utilization; capacity of the Department to absorb additional funds; new schemes and projects planned; district-wise detail of initiatives taken by the Department towards the promotion of science and technology among SCs/STs and women; five visible achievements that the Department may achieve in the year 2020-21; bringing down the establishment expenditure and diverting more of the allocation towards R&D; data localization; comparison of R&D expenditure across different countries with India; percentage of R&D funds devolved to the private sector and ways to increase these allocations for better outcomes; need to define clear time based, cost based and goal based objectives for a mission; impact of withdrawal on tax exemptions on R&D investment made by the private sector, etc.

5. The representatives of Department of Science and Technology, while presenting their views, also responded to some of the queries raised by the Chairman and Members of the Committee. The Chairman directed the Secretary to furnish detailed written replies to queries/points/issues raised by

him and the Members of the Committee, which could not be replied during the meeting, to the Secretariat, within a week.

6. The representatives of Department of Science and Technology then withdrew.

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23. A verbatim record of the proceedings was kept.

24. The meeting of the Committee adjourned at 4:01 pm.

*Relate to other matters.

XI
ELEVENTH MEETING

The Committee met at 9.30 A.M. on Wednesday, the 4th March, 2020 in Committee Room 'A', Ground Floor, Parliament House Annexe, New Delhi.

MEMBERS PRESENT

1. Shri Jairam Ramesh -- **Chairman**

RAJYA SABHA

2. Shri R.S. Bharathi
3. Shrimati Vandana Chavan
4. Shri Ashwini Vaishnaw
5. Shri Ravi Prakash Verma
6. Shri Binoy Viswam

LOK SABHA

7. Shri Guharam Ajgalley
8. Shri Pradan Baruah
9. Shri Sudarshan Bhagat
10. Dr. Swami Sakshiji Maharaj
11. Shri S. R. Prathiban
12. Dr. Ranjan Singh Rajkumar
13. Dr. Jayanta Kumar Roy
14. Shri Mahesh Sahoo
15. Shri Francisco Cosme Sardinha
16. Shri Anurag Sharma
17. Shri Ram Shiromani
18. Dr. Ramapati Ram Tripathi

SECRETARIAT

Smt. Sunita Sekaran, Joint Secretary
Shri T.N. Pandey, Director
Shri S. Rangarajan, Additional Director
Shri Rajiv Saxena, Under Secretary
Shri Harish Kumar, Committee Officer

2. At the outset, the Chairman welcomed the Members to the meeting of the Committee. He informed that the meeting had been convened to consider and adopt the draft 326th, 327th, 328th, 329th, 330th, 331st and 332nd Reports of the Committee on Demands for Grants 2020-21 of the Ministries/Departments of Atomic Energy, Biotechnology, Scientific & Industrial Research, Science & Technology, Space, Environment, Forest & Climate Change and Earth Sciences, respectively.

3. Thereafter, the Committee considered the draft 326th, 327th, 328th, 329th, 330th, 331st and 332nd Reports and adopted the same with slight modifications with respect to the presentation of the budgetary allocations in all the reports. The Committee also decided to present/lay the reports to both the Houses of Parliament on the 6th March, 2020.
4. The Committee also decided to nominate the Chairman and, in his absence, Shri Binoy Viswam and in his absence, Shri Ravi Prakash Verma to present the reports in Rajya Sabha and Dr. Ranjan Singh Rajkumar and, in his absence, Shri Guharam Ajgalley to lay the reports on the Table of Lok Sabha on the 6th March, 2020.
5. The meeting of the Committee adjourned at 10:20 A.M.