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Comments to Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change on Demand for Grants (DFGs) in the Budget for FY 2025-26

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Executive Summary

This document presents the analysis of the Demand for Grants (DFGs) presented by the Ministry of Science and Technology for the fiscal year (FY2025-26). The findings show a disproportionately low spending on research expenditure relative to the total budget and under-utilisation of research budgets by the Ministry's various departments. The document offers select recommendations on the budgets proposed by the Department of Biotechnology, and Department of Science and Technology.

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Major Budgetary Trends

1) Despite a slight increase in R&D spending since last year, the Government's allocation for R&D within concerned ministries and departments remains disproportionately low relative to the total budget.
    a) The spending on R&D relative to the total budgetary spend of the Union Government has marginally increased since last year.
    b) However, the R&D spending as a proportion of the total budget allocation continues to be low (0.87%). For context, between 2016-2020, this ratio hovered between 1.28-1.36%.
    c) It is important to highlight that actual spending frequently deviates from the budgetary estimates.
    d) For the calculation of total spending on R&D, the major heads used are enumerated in Table 1 (Appendix). The DST loan of Rs 20000 crores has not been included in the R&D spending calculation.
    e) Some departments and ministries have clearly demarcated the spending on research and development. However, it is difficult to delineate the same from the Ministry of Environment, Forest and Climate Change expenditure estimates. **Better accounting classification would help analysis in the future.**

f) **R&D spending needs to be prioritised.**

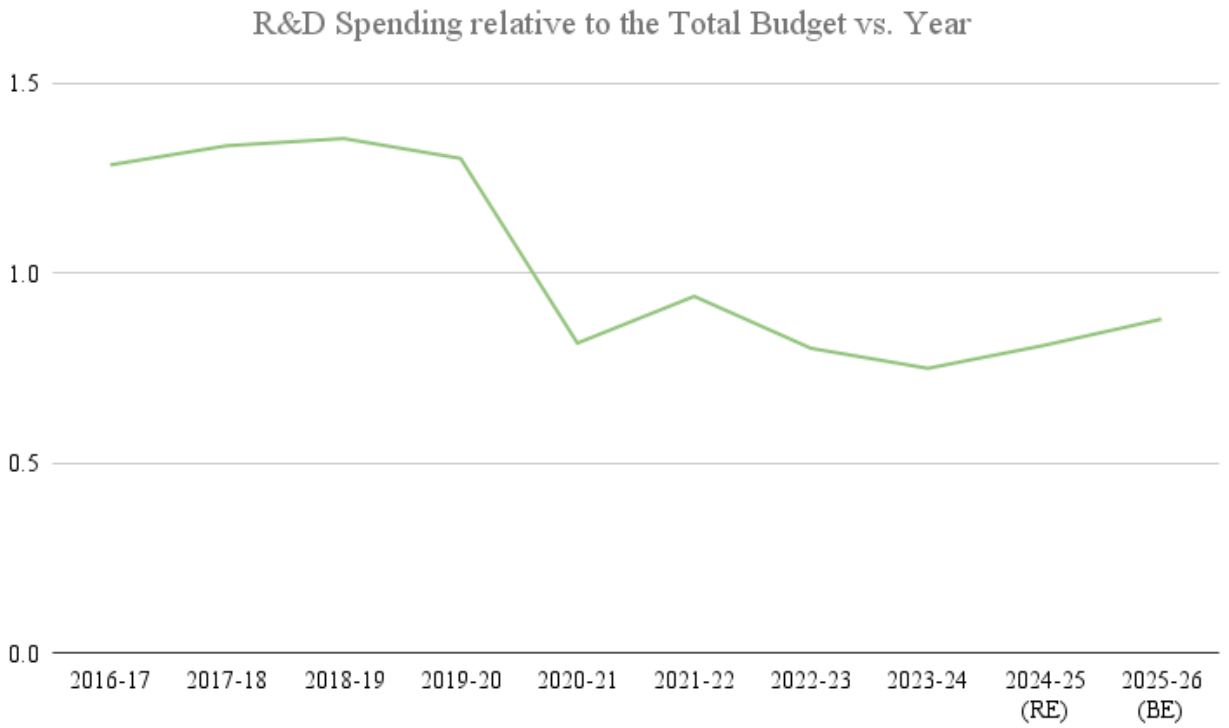

Figure 1: The ratio of R&D budget estimates to the grand total budget expressed in Percentage

2) **The Revised Estimates for FY 2024-25 relative to the Budget Estimates for FY 2024-25 are closer than in the previous years. This is a positive trend.**

    a) In FY 2022-23, the Revised Estimates varied by 10% or more from the Budget Estimates in 6 out of 7 instances. In 2023-24, such variations occurred in 4 departments/ministries. The situation has improved further in 2024-25 - only 2 cases of significant variation.
    b) The revised estimates for the **Department of Science and Technology remain lower than** the budget estimates, though the divergence has marginally reduced.
    c) **Lower revised estimates can imply insufficient delivery compared to the initial budgetary promise and indicate weaker capacities to estimate requirements. The reason for this must be analysed, and the demand for grants must be scrutinised.**
    d) In the past, the revised estimates for the Ministry of Earth Sciences and the Department of Biotechnology used to be relatively lower than the budgeted outlay. However, in FY 2024-25, the revised estimates exceed the budget outlay. It may be worthwhile to examine the reason for this sudden

change. The **higher revised estimates might reflect weaker capacities to estimate requirements or ad hoc expenditures.**

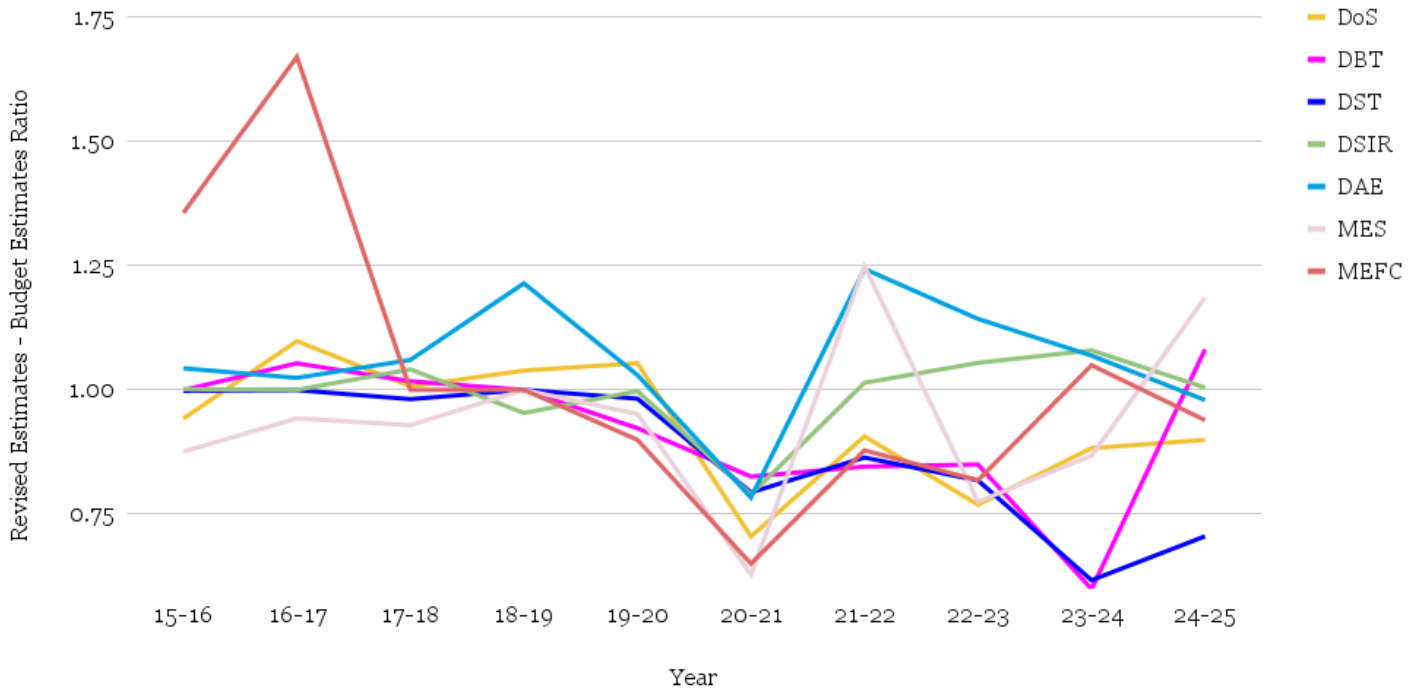

Figure 2: Revised Estimates (RE) diverge significantly from the Budget Estimates (BE) for 6 out of 7 departments/ministries

3) **However, the Actuals continue to be lower than the Revised Estimates.**
    a) **For FY 2023-24, the actual expenditures for all the concerned ministries and departments were less than the revised estimates.** This was also the case in FY 22-23. In FY 21-22, in 6 out of 7 instances, the actual expenditure was lower than the revised estimates (Figure 3)
    b) The gap between the actual expenditure and the revised estimates **increased for 4 of the seven** departments/ministries (FY 2022-23)
    c) For the **Department of Science and Technology** and the **Ministry of Earth Sciences**, **actual spending is 18% and 17% lower** than revised estimates, respectively.
    d) **The reason for lower actual expenditures needs to be analysed and scrutinised while considering the demand for grants for the upcoming fiscal year.**

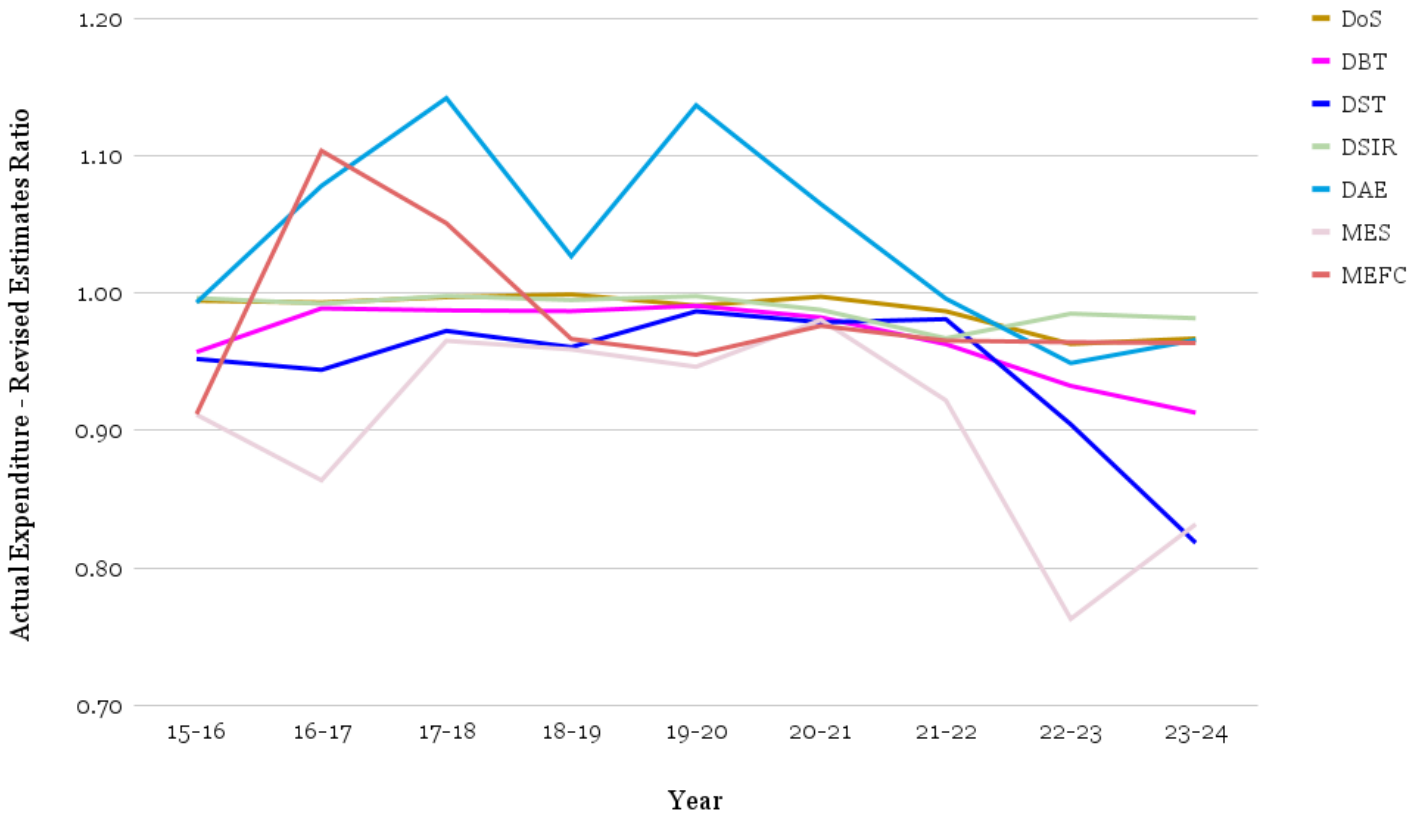

Figure 3: Actual Expenditure to Revised Estimates ratio

4) **The actual capital expenditure for many of the concerned departments and ministries has been minimal.**
    a) The ratio of capital to revenue expenditure for 5 of the seven departments/ministries has been lower than 6% (ratio < 0.06). Low capital expenditure might imply less focus on building laboratories, R&D infrastructure, etc.
    b) As per the Union Budget documents, the Department of Biotechnology's capital expenditure has been 0 for the last 14 years. This might be an accounting issue.

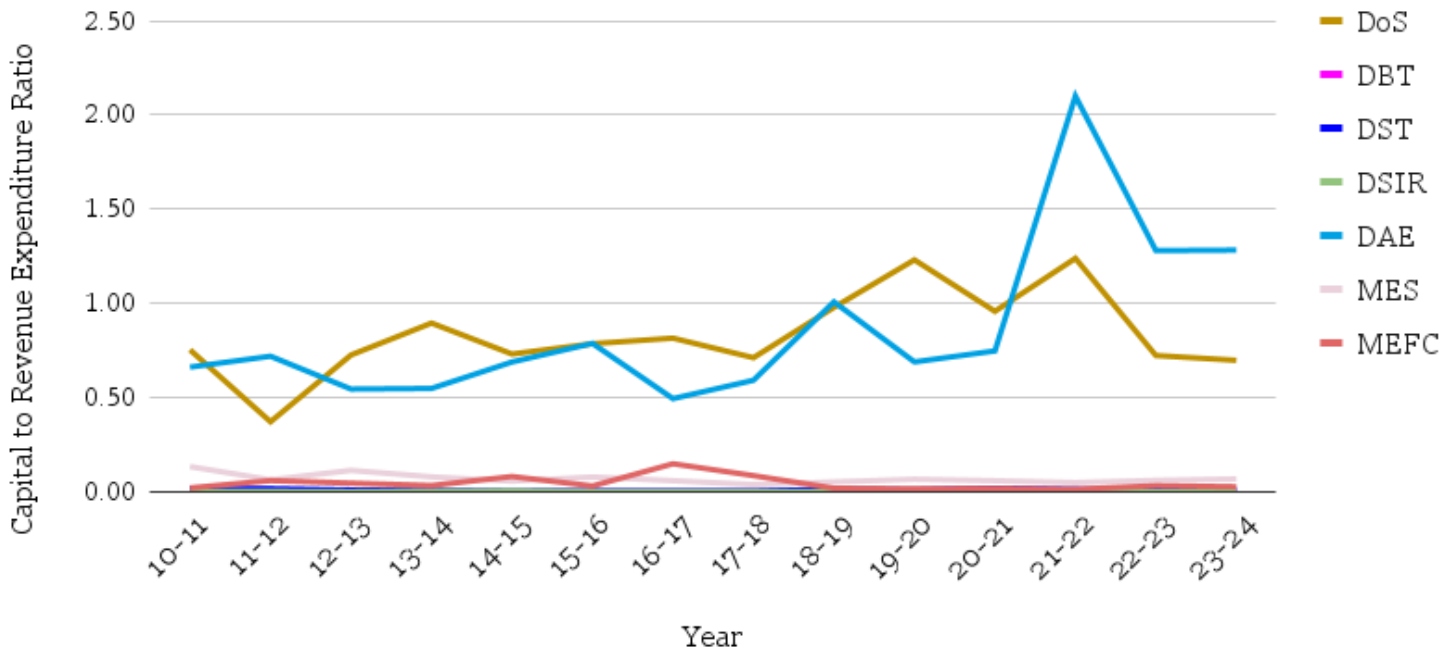

Figure 4: Ratio of Capital to Revenue Expenditure

Demand for Grants (2025-2026) for the Department of Biotechnology

The overall funding allocated for DBT has been increased in conjunction with the government's new BioE3 and Bio-RIDE policies. However, details on implementation of both schemes would help clarify the optimal use of allocated funds. For example, the Bio-RIDE programmes subsumes three of DBT's major initiatives and has thus received an appropriate fund increase. But a comparative analysis of the associated outcome-output framework for the schemes between FY2024-25 and FY2025-26 shows many details are lacking. For example, in the previous FY clear targets for genetically edited crops or veterinary vaccines or biopharma products were proposed as an outcomes of funding. In the current FY, these have been clubbed under new products, reducing the granularity of information available for analysis. The availability of sector-wise targets were helpful in aiding investor confidence and signalling the government's priorities to scientists and researchers. Similarly the current outcome output framework has no details on the BITP programme, which was useful in vocation training of young students.

In addition, although there has been an increase proposed in the number of NIDAN Kendras from 20 last FY to 25 this year, there is no concomitant increase in number of women/children being screened under the programme. It is also unclear why the number of fellowships (DBT JRF, RA, etc) supported during the year is only 25 as opposed to many hundreds from the previous years. DBT fellowships are also spread across two rows causing confusion on what extent of fellowships will be actually supported. Similarly, there is disparity between two rows on the number of Biotech – KISAN hubs being supported – in one line only 8 have been shown to be supported, in another row the number is 2750. Clarity on outputs and outcomes would be helpful to understand the government direction in establishing biotechnology as a critical technology in the country.

The section on international science cooperation is important, but doesn't have any outcomes to match the outputs. In previous budgets, outcomes had also been included. Further, although India is meant to partner with over 20 countries, only one collaboration has been detailed in the outputs. Joint fellowships with other countries such as Australia which have also been announced should be included in this budget.

Demand for Grants (2025-26) for the Department of Science & Technology

Below are scheme-wise comments for the DST:

Anusandhan National Research Foundation

1) The ₹2,000 crore allocation for FY2023-24 was later revised to ₹258 crore, and actual spending for that year was zero, as no schemes were launched. In FY2024-25, another ₹2,000 crore was allocated, but later revised to ₹200 crore. Now that ANRF initiatives are underway, spending should increase. However, a roadmap for fund utilisation and scheme objectives would be helpful for planning R&D activities.

2) ANRF was supposed to raise ₹7,000 annually from non-governmental sources. There is no information about whether these funds were raised in previous years. Clarity on how many funds were raised and spent, and a roadmap for further fundraising is warranted.

Recognition of In-house R&D Units

1) The government has allocated a ₹20,000 crore corpus to provide zero- to low-interest loans for private-sector research. In the interim budget a corpus of ₹1,00,000 crore research fund has been announced. It is unclear if this a revised corpus or the first installment of the one announced in the interim budget.

2) DST is also the conduit for ANRF and is a government agency, not a banking instrument. It is unclear why DST, which may likely have conflicting priorities, be the correct instrument for disbursing this fund.

3) ANRF requires raising non-government funding to support research and RDI allocates government funds to support non-government research - this signals a confusion on what ails private sector innovation in the country.

National Geospatial Mission

1) Separate funds allocated for National Geospatial Mission; Space applications and NE-SAC under Dept of Space; Bhaskaracharya National Institute for Space Applications and Geo-Information

under MeitY; Mission Mausam under MoES; and Geological survey of India under ministry of Mines focus on similar capacity building targets. It is unclear how the DST plans to coordinate with these ministries to prevent duplication of efforts and ensure better utilisation of financial resources.

Personnel:

1) Despite a massive increase in allocation, there is no concomitant increase in budget for personnel to appropriately govern this spend. It is unclear how DST will disburse this amount.

Appendix

Table 1 - Research and Development Budget Estimates. All figures are in Crores

Departments/ Ministries	Heads	2025-26 (BE)	2024-25 (RE)	2023-24	2022-23	2021-22	2020-21	2019-20	2018-19	2017-18	2016-17
DAE	Atomic Energy Research	9627.94	9226.66	7337.42	7006.76	6111.46	5913.91	6483.57	5715.54	5786.35	5073
	Capital Outlay on Atomic Energy Research	1490.81	1408.07	2616.44	3426.01	3014.21	1283.15	1956.96	1643.23	1518.35	1590.79
MES	Oceanographic Research	1089.4	1273.29	717.49	535.95	712.72	432.89	649.09	690.39	531.01	412.34
	Other Scientific Research	15.97	15.43	63.18	71.12	64.5	44.5	67.62	100.41	48.53	43.09
	Capital Outlay on Oceanographic Research	339.6	135	55.23	15.81	7.15	5.85	11.23	13.16	9.96	7.89
MoEFCC	Capital Outlay on Other Scientific and Environmental Research	56	36	37.48	46.42	11.44	15.28	21.42	30.57	26.48	26.3
	Autonomous Bodies	454.62	437	562.32	358.14	315.4	290.48	326.49	326.48	277.91	234.77
DST	Other Scientific Research	8297.55	5477.59	3856.35	4302.07	4998.76	4728.52	5276.87	4766.47	4509.15	4133.52
	Capital outlay on Other Scientific and Environmental Research	95.85	73.36	40.13	40.03	57.47	86.48	49.27	64.95	10.15	8.51
	Loans for other Scientific Research	20000	0	0	0	0	0	0	0	3.8	4
DBT	Other Scientific Research	3161.16	2250.74	1429.28	2012	2819.57	2232.7	2328.5	2351.29	2204.55	1874.6
DSIR	Other Scientific Research	6639.24	6331.96	6062.1	5835.41	5116.99	4181.64	4857.69	4532.52	4606.44	4015.99

	Capital Outlay on Other Scientific and Environmental Research	0.3	0.08	0.33	0	0.04	0.12	0.04	0.36	0.16	
	Loans for other Scientific Research	0.91	0.91	0	0	0.6	0	0.3	0.33	0.3	3.71
DoS	**Space Research**	7198.77	6865.38	6171.14	5772.57	5525.86	4818.76	5785.52	5602.77	5294.6	4377.02
	Capital Outlay on Space Research	6103.63	4728.37	4396.75	4253.43	6901.86	4633.96	7181.02	5532.64	3792.65	3587.07

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