



BRAIN DRAIN AT DRDO: INDIGENISATION IN PERIL?

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According to the statement made by Defence Minister A.K. Antony in parliament on 8th December, a total of 443 scientists resigned from the DRDO during 2008-2012, whereas another 44 scientists have quit in 2013 till November 30 [the DRDO has about 7,000 scientists]. Most of those who left were senior scientists and were involved in crucial defence development projects.ⁱ The matter is of grave concern not only for the defence forces who are dependent on DRDO for weapons design and development but also for the government as it puts the entire indigenisation process in jeopardy at a time when government has finally realised the need for indigenisation in defence.

Those who are familiar with DRDO functioning would not be surprised with this news because the same issue was raised in 2006 when in the testimony before the Parliamentary Standing Committee on Defence, DRDO had admitted that in the previous ten years about 1404 scientists had quit their job at DRDO for higher paying jobs in the Information Technology (IT) sector which had started booming at the same time, thus progressively reducing the technical strength of the DRDO by 10%. The DRDO had also confessed to the Committee that “The problem is not of the numbers and not of the lack of training but of retaining the scientists.”ⁱⁱ This raises some obvious questions such as why DRDO has not been able to preclude this flight of scientists.

The reasons given by the scientists for opting out of DRDO are a limited opportunity for promotion, unfriendly work environment, comparatively meager pay and not so high a status in society when compared to people in other public services, especially bureaucrats.

Sources also claim that widespread corruption in DRDO is also a major factor.ⁱⁱⁱ Dozens of top scientists at the DRDO are working on extended tenures despite the government disfavouring the policy of retaining officers or specialists after their retirement [retirement age for scientists in 60] and according to the guidelines, tenures can be extended only in "exceptional circumstances".^{iv} This not only means that the next man misses his promotion but often several people miss consequential promotions all along the hierarchy. In the face of all these impediments in their work and career, many simply choose to move to private sectors or to foreign research organisations where they are not only respected but also paid handsomely.

Apart from retaining the trained scientists, the other major challenge DRDO faces is of attracting the talented engineers. Why are government organisations not able to attract the best talents despite having a number of premier institutes like IITs, IISc, IIITs and NITs? Why aren't IITians interested in joining premier Government organizations like DRDO, ISRO etc.?

When Prime Minister Jawaharlal Nehru laid the foundation for IITs, his fondest hope was that the engineers who would graduate from there would contribute in the development of nation by engaging in R&D activities. But the truth is that now IITs have only become a launch pad for Indian students who study at these premier institutes and then opt for a foreign company that offers them fat paychecks^v. Probably they are not wrong because one is able to secure admission in IITs only after spending money for coaching and getting through a tough and competitive examination. But since the government cannot pay a salary equivalent to the private sector due to budgetary limitations, it could try to offer them a decent salary and add certain amenities and privileges to it which would make the talented lot to reckon the career opportunity in India. The remaining difference in the private and public sector pay could easily be

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compensated by the patriotic zeal as the young generation is aware that they have to contribute to the development of the nation.

The government needs to get serious about this brain drain before it is too late. It would not only affect the R&D capability of the defence research organisations like DRDO, HAL and ADA but also will slow down the defence indigenisation process. This year's Bharat Ratna awardee Dr. C.N.R. Rao rightly pointed out that what India needs is not just more spending on R&D but intellectual support to the institutes that undertake R&D. India spends only 1% of its GDP on R&D whereas South Korea spends around 3% and China spends 6%. The stark difference in the output of Chinese defence manufactures and Indian manufactures thus explains it itself. He has emphasised that only more investments in science would make young Indians believe that the country's future is linked to science and added that "If India starts investing in science as much as China and South Korea do in the next couple of decades, we can make up for lost time."^{vi}

One commendable step DRDO has taken is that in order to compensate for the shortage of manpower, **it is collaborating with the IITs**

to conduct joint research programmes to meet the needs of defence and security.

While the DRDO will sponsor research scholarship to Ph D students working on defence related projects, the IITs will recognise the defence research body's laboratories as research centres for doctoral programs and DRDO scientists as external research supervisors.^{vii} The premier technical institutes will also offer auxiliary professorship to both serving and retired scientists of DRDO on the recommendation of the defence research body.

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As brought out earlier, the absence of motivations and lack of incentives for scientists and engineers in government organizations drives the newly graduated engineers towards the high paying private sector jobs. Also, it is not easy to convince a talented engineer to accept a comparatively less paying job in a government organization. This problem can easily be overcome by catching the talent when it is young. For this the government organizations need to target students at the school level itself and encourage them to consider a career in pure science. The task is not very difficult because at school level students are more enthusiastic about the kind of opportunities and areas they would get to work on if they join a reputed research organization. So with appropriate counseling, guiding and grooming the defence research organizations can easily create a pool of talent for themselves to help them in their core task of R&D.

Lastly, the society also needs to admire and applaud the scientific community for achieving feats like Chandrayaan and Mangalyaan missions. As Dr. Rao wrote to the prime minister, "What is required is not a mere increase in investment in science and technology from the current roughly 1 per cent of the GDP to the promised 2 per cent, but also the moral and intellectual support of the society as a whole."^{viii}

Endnotes:

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies CAPS)

ⁱ "DRDO Losing its Trained Scientists says Antony", *The Tribune*, December 10, 2013. Available at: <http://www.tribuneindia.com/2013/20131210/nation.htm#16>

ⁱⁱ Amitav Ranjan, "Why They Don't line up for DRDO job interviews", *The Indian Express*, November 27, 2006. Available at: <http://www.indianexpress.com/news/why-they-don-t-line-up-for-drdo-job-interviews-----/16736/>

ⁱⁱⁱ Gautam Datt, "Whistleblower DRDO Officer Sacked for Highlighting Corruption", *India Today.in*, November 3, 2012. Available at: <http://indiatoday.intoday.in/story/whistleblower-drdo-officer-prakash-singh-punished-corruption/1/227461.html>

^{iv} Gautam Datt, "Oldies of DRDO cling on to their jobs post retirement", *India Today.in*, October 25, 2012. Available at: <http://indiatoday.intoday.in/story/defence-research-and-development-organisation-drdo-rti-scientists-avinash-chander/1/226107.html>

^v Sanya Ohri, "Placements and Paychecks: The Story of IIT", *CoolAge.in*, December 10, 2012. Available at: <http://www.coolage.in/2012/12/10/placements-and-paychecks-the-story-at-iit/>

^{vi} Saritha Rai, "The Waning of Science in India", *The Indian Express*, December 10, 2013. Available at: <http://www.indianexpress.com/news/the-waning-of-science/1205590/0>

^{vii} Deccan herald, august 19, 2013. Available at: <http://www.deccanherald.com/content/352131/drdo-iits-hold-joint-research.html>

^{viii} *Ibid.*,