

Weighing in on the National Research Foundation Bill

The scientific community in India is abuzz with curiosity and excitement after the Union Cabinet's approval of the National Research Foundation (NRF) Bill 2023 in June this year to "strengthen the research eco-system in the country".

The Bill is to be introduced in Parliament. Once passed, it is to establish an apex body to spearhead research and development, foster a culture of innovation, and nurture a research ecosystem across all universities and colleges in the country.

Simultaneously, the Bill seeks to repeal the Science and Engineering Research Board (SERB) Act 2008, under which the SERB was established as a statutory body of the Department of Science and Technology (DST) to carry out almost the same or similar functions which the NRF proposes to do.

The finer points

The idea of establishing the NRF as an independent foundation to promote and fund research was mooted by the Kasturirangan Committee in 2019 and adopted in the National Education Policy (NEP 2020). Importantly, both documents mentioned, in no uncertain terms, that the institutions currently funding research, such as the DST, the Department of Atomic Energy (DAE), the Department of Biotechnology (DBT), the Indian Council of Agricultural Research (ICAR), the Indian Council of Medical Research (ICMR), the Indian Council of Historical Research (ICHR), and the University Grants Commission (UGC), as well as various other private and philanthropic organisations, would continue to fund research according to their priorities and needs independently.

The list of existing institutions funding research did not separately mention the SERB but there was no indication in the policy document that it would be abolished or subsumed into the NRF. Therefore, the scientific community had assumed that it shall, as a statutory body of the DST, continue to support and fund research as before.

To lend credence to the idea, it highlighted the point that leading research-producing nations had multiple public and private funding agencies; further, there was no reason that India could not stand to benefit from the practice.

The idea of having multiple research funding



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Budgetary allocation for the National Research Foundation should not be reduced as growth in research and knowledge creation is linked to ample financial support

agencies gets further reinforced by the statement that the NRF would coordinate with other funding agencies and work with science, engineering, and other academies to ensure synergy of purpose and avoid duplication of efforts.

The financial outlay

Highlighting the lack of a conducive research ecosystem and underinvestment in research, the Kasturirangan Committee had said that the NRF would get an 'annual grant of Rs. 20,000 Crores (Rs 2 Kharab or 0.1% of GDP)'.

It did not say how long this grant would continue, but it did note that research spending in the country was a meagre 0.65% of GDP compared to 2.8% in the United States, 2.1% in China, 4.3% in Israel and 4.2% in South Korea. It expressed concern that research and innovation spending in the country had declined from 0.84% of GDP in 2008 to 0.69% in 2014.

Against this backdrop, even those who were pessimistic had felt that the proposed annual grant would continue until the research spending in the country reached the level it had been in 2008. The optimists in the community had hoped that it might continue until it reached the level of research spending in the U.S.

The NEP 2020 adopted the idea, but without any specific financial commitment. In the meantime, public and private expenditure on research and development taken together kept sliding to touch 0.64% of GDP in 2020-21 compared to 0.76% in 2011-12.

A Press Information Bureau release suggests that the NRF will have ₹10,000 crore for five years and thus get a total of ₹50,000 crore. Despite the scant details available in the public domain, it shows that the government grant or budgetary support would be at the most ₹14,000 crore while the remainder (₹36,000 crore) is to be mobilised through industry and other private philanthropic sources. This would effectively mean that the NRF would get a maximum annual grant of ₹2,800 crore over the next five years, a mere 14% of what the Kasturirangan Committee had recommended.

Following the repeal of its Act, the SERB will be subsumed into the NRF. The SERB was established as a statutory body of the DST to plan, promote and fund internationally competitive research in emerging areas of science

and engineering. The SERB has been instrumental in building a sustainable research ecosystem 'through a diverse programme portfolio that includes grant funding, fostering young researchers, recognising and rewarding research excellence, promoting scientific networks and partnerships, and enhanced gender and social inclusiveness'.

Budgetary allocation for the SERB had steadily increased from ₹200 crore in 2011-12 to ₹1,000 crore in 2018-19. Since then, allocation declined to ₹742 crore in 2020-21, but again rose to ₹911.46 crore in 2021-22. SERB programmes, schemes and activities have been important in financing basic research in science and engineering, and most of them will continue under the NRF with some tweaking and tinkering.

It is hoped that the budgetary allocation for the NRF will not be reduced by the amount allocated for the SERB. Experience shows that when schemes are merged or subsumed into a new scheme, the allocation for the new scheme is generally lower than the total for the discontinued schemes.

Greater relevance now

The criticality of research and knowledge creation and the importance of enhancing funding for research has been amply highlighted by the New Education Policy. It insists that the economic prosperity of many developed countries, now and in the ancient past, can be attributed to their intellectual capital and to their fundamental contributions to new knowledge in science, arts and culture. It cites India, Mesopotamia, Egypt and Greece as examples.

The NEP argues that a robust research ecosystem acquires greater importance now due to growing challenges in the world and opportunities due to technological advancements.

The policy asserts that India has had a long tradition of research and knowledge creation in science, mathematics, art, literature, phonetics, language, medicine and agriculture, which needs to be strengthened to make India a leader. These are laudable ideas and intentions, but need to be backed by ample financial support, at least to the extent the Kasturirangan Committee had insisted upon.

The views expressed are personal

The hornets' nests in the Forest Amendment Bill

The Lok Sabha passed the Forest (Conservation) Amendment Bill, 2023, on July 26, with no substantive changes from the original version introduced in March. It ignores strong public objections that highlighted a number of concerns. The Bill commences with a promising Preamble, expressing a commitment to achieving net zero emissions by 2070, creating a carbon sink, increasing forest cover, and improving the livelihoods of forest-dependent communities. However, the operative part of the Bill shows little connect with the Preamble. Instead, it excludes entire categories of forest from the ambit of the law and, ironically, even facilitates the destruction of forests.

The problem areas

The Forest Conservation Act of 1980, which this Bill aims to amend, admittedly and justifiably adopted a rather protectionist stance which made forest clearances time consuming and costly to obtain. While current development needs and priorities must be recognised, this Bill deviates in a significant manner from the spirit of the original law. Three points that emerge from the Bill have caused considerable consternation among environmental experts: the narrowed definition of forests under its scope; the exclusion of significant tracts of forest areas; and the granting of sanction to additional activities that were regulated earlier. These need to be better explained.

The Bill will significantly restrict the application of the landmark Godavarman judgment of 1996 which had extended the scope of the 1980 Act to the dictionary meaning of 'forest' – that is, areas with trees rather than just areas legally notified as forest. The present Amendment restricts the Forest Conservation Act to only legally notified forests and forests recorded in government records on or after October 25, 1980. This change could potentially impact around 28% of India's forest cover, encompassing almost 2,00,000 square



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The operative part of the Bill shows little connect with the Preamble, excluding entire categories of forest from the ambit of the law, and even facilitating their destruction

kilometres. While these forests include fruit orchards and plantations, they also encompass forests of exceptional quality and conservation value. An instance is the category of Unclassed Forests in Nagaland, that have so far not been officially recorded or deemed forests despite centuries of protection and use by autonomous clans. Perversely, States that have refused to identify important forest areas despite the Godavarman judgment, may now be free to allow the destruction of these forests for construction and development. For the same reason, large swathes of the Aravalli Hills in the Delhi National Capital Region which are considered ecologically significant, apart from being critical to the water security of this region, may be affected by the amendment.

Second, the Bill excludes some of India's most fragile ecosystems as it removes the need for forest clearances for security-related infrastructure up to 100 km of the international borders. These include globally recognised biodiversity hotspots such as the forests of northeastern India and high-altitude Himalayan forests and meadows.

Third, the Bill introduces exemptions for construction projects such as zoos, safari parks, and eco-tourism facilities. Artificially created green areas and animal enclosures are very different from natural ecosystems which provide a bouquet of ecosystem services that contribute significantly to human well-being. What is worrying is that the Bill also grants unrestricted powers to the Union government to specify 'any desired use' beyond those specified in the original or amended Act. Such provisions raise legitimate concerns about the potential exploitation of forest resources without adequate environmental scrutiny.

Disenfranchising forest people

Another important concern is that the Bill makes no reference to other relevant forest laws. For instance, the Scheduled Tribes and Other

Traditional Forest-dwellers (Recognition of Forest Rights) Act, 2006 finds no mention. Instead, the exclusion and ease of diversion of forest areas will mean that forest people's institutions no longer need to be consulted. This is not just a matter of equity. In neighbouring Nepal, the handing over of forests to local community forest user groups is credited to have helped the country increase its forest cover from 26% to 45% over just three decades. If India is to meet its net zero carbon commitments and increase forest cover (as the Bill envisages in its Preamble), it would be wise to further the participation of forest people, rather than disenfranchise them.

Exclusions that raise eyebrows

The system of forest clearances under the FCA (1980) may have been flawed but this Bill does little to rectify these deficiencies. Instead, it just excludes certain privileged sectors from its ambit. When democracy's gears grind a little too slowly, it is better to fix them than to dismantle them. These systems provide an essential check to assess the impact of projects which change land use and to mitigate the impacts resulting from environmental destruction.

Yes, exceptions are needed. The objective of fast-tracking strategic and security related projects is a fair ask. Administrative processes can and should be speeded up and needless delays in environmental clearance avoided. However, giving blanket exemptions from regulatory laws is not the answer. The importance of India's natural ecosystems must be valued. India's northern borders, where exemptions will perhaps be most used, are framed by the geologically active Himalaya. Recent events in Joshimath (Uttarakhand) have shown the need for proper geological and environmental assessments for all development projects.

Forests and other natural ecosystems cannot be considered a luxury. They are an absolute necessity.