

# PASCHIMBANGA VIGYAN MANCHA



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Ref. No.: .....

Date: 30<sup>th</sup> January, 2021

To  
Dr. Harsh Vardhan  
Hon'ble Minister in Charge  
Department of Science and Technology  
Government of India

Sub: Submission of feedback on Draft Science, Technology and Innovation Policy, 2020

Sir,

On Dec 31<sup>st</sup>, 2020 a Draft Science, Technology and Innovation Policy, 2020 was released albeit, only in English language, online by DST and a feedback response date of 25th January, 2021 was given. Two days before that date, in response to Paschimbanga Vigyan Mancha (PBVM)'s appeal to extend the last date for public consultation, the deadline was, however, extended for six days only, i.e. up to 31<sup>st</sup> January, 2021. PBVM still demands for extension of the same for at least two months and to publish the draft document in all the languages registered in the 8<sup>th</sup> schedule of our Constitution as well for wide circulation and hence, comprehensive suggestions from stakeholders across the country on such an important policy document. We also demand a proactive and structured engagement with the S & T community across various states, and the S & T community of West Bengal, the citadel of S & T innovation since the pre-independent India.

PBVM, country's largest people's Science Movement Organisation has, however, tried to critically review this 63 pages draft document within the given time frame and has noted some important points in connection with the same and I, on behalf of the organisation, submitting the feedback which must be addressed and appropriately clarified before finalising the 5<sup>th</sup> STIP.

Please acknowledge the receipt and treat the attachment as official feedback on Draft Science, Technology and Innovation Policy, 2020 from our organization.

We would like to put on record that, unless the modifications we have suggested are not addressed or incorporated, the draft STIP 2020 shall be totally unacceptable to us.

Thanking You,

With regards

*Pradip K. Mahapatra*

(Dr. Pradip Mahapatra)

**General Secretary**

**Paschimbanga Vigyan Mancha**

## **Draft Science, Technology and Innovation Policy, 2020**

### **Feedback and observations from Paschimbanga Vigyan Mancha**

In the midst of the ongoing pandemic, Science Technology and Innovation Policy (STIP) Forum and Department of Science and Technology (DST) initiated a series of discussions in different tracks to confer various parts for formulating a draft STIP. On Dec 31<sup>st</sup>, 2020 a draft was released only in English language online and a feedback response date of 25th January, 2021 was given.

Paschimbanga Vigyan Mancha (PBVM) along with various other organizations in the country including the AIPSN had appealed for an extension of the deadline for feedback and also demanded availability of the document in different Indian languages, the deadline has since been extended only by 6 days, i.e., till the 31<sup>st</sup> January, 2021. We still demand further extension of at least two months for feedbacks. PBVM, country's largest people's Science Movement Organisation has, however, tried to critically review this 63 pages draft document within the given time frame and has noted some important points in connection with the same which must be addressed and appropriately clarified before finalising the 5<sup>th</sup> STIP.

The focus of STIP 2020 is rightly on how to enable India to march ahead on a sustainable development pathway towards 'Atmanirvar Bharat', and the document aptly specifies that the post-COVID context is going to pose colossal challenges in the coming future. But the path indicated in the draft to achieve the mentioned goal is completely confusing.

#### **No evident dialogue with the S & T community in West Bengal, the citadel of S & T excellence, and other Indian states**

We also note that there has been no evident engagement with the scientists and technologists in different R & D institutions including the universities during the drafting process of this document. A close reading of the draft suggests that the process of consultations was not carried out with various stakeholders. For example, West Bengal has been a citadel of S &T research for self-reliance since the pre-independence era but the voices of the scientific community of the state has not been heard while drafting the document. Of course the same holds true for other states as well. We therefore demand a wider consultation with the S & T community of different state and this state in particular before finalizing the policy document. This consultation with the widest possible section of the S & T community is pivotal in drafting a policy of this magnitude.

#### **Limited in Scope**

The policy that is to be for the entire nation with the transformational aims in view, in reality the draft document turns out to be grossly inadequate for several reasons. In terms of the scope of objectives, policy instruments and implementation framework, the draft STIP-2020 is neither national nor transformational. The document appears more as a policy roadmap for the Ministry of Science and Technology alone and the tasks to be implemented by the DST and the office of Principal Scientific Advisor. This draft does not offer anything in terms of policy recommendations on the policy instruments to be directly used by the ministries/departments/agencies of the union government and states/UTs. It is apparent that the DST and the office of PSA have not been able to get the government departments of the Central Government to get on board with the process of identification and implementation of innovation policy mixes for the identified grand challenges. As noted earlier, this document is merely a document of DST to engage with its own mandate and the scope of work that the

department envisages implementing in practice. The DST does not have the capacity or the mandate to take up the responsibility of sectoral innovation policies. Analysis of the proposed new policy instruments suggests that these are not even directly relevant to the responsibilities being borne by economic and social ministries. Policy mixes for the implementation of grand vision of post-COVID societal goals of transformation identified by the STIP 2020 are largely S&T policy instruments only.

### **No critical analyses of the previous Science and Technology Policies**

There is hardly any doubt that the draft is full of verbosity, but surprisingly, no critical analyses of the previous Science and Technology Policies have been incorporated in the new draft. Although there are a lot of claims made on evidence-driven, inclusive and bottom-up policy process steered and coordinated for the well being of the nation and its people with socio-economic and environmental considerations in the section II on evolution of STI policies in India, but there is visibly no evidence of the comprehensive review of past policy processes undertaken to specifically identify the problems and concerns pertinent to transforming the innovation policy governance structures, innovation policy processes (policy cycle) and institutional capacities for implementation of innovation policies.

Astonishingly enough, the STIP 2020 has not even initiated with ample review of the implementation of the S&T chapter and the Innovation chapter of the 12<sup>th</sup> Five Year Plan, and engaged with the policy rationales, arrangements, targets and constraints to recommend on the innovation policy mixes. It merely makes a mechanical mention that the 12<sup>th</sup> FYP (2012-17) focused on the creation and development of R&D facilities, building technology partnerships with states, large scale investment in Mega Science projects, etc. and then it straightway jumps on to state that 'India is rapidly evolving with changing national and international dynamics'.

### **Surrendering science to the corporate big business houses**

In terms of the extent of objectives, policy instruments and implementation framework, the draft available for STIP-2020 for public comment is neither national nor transformational. The STIP 2020 cannot be limited to the challenges identified by the Ministry of Science and Technology alone.

'Atmanirbhar Bharat' is a major focus of the present government and it has naturally found a place in this document. However, there are issues that need to be addressed for this ostensible Atmanirbhar Bharat rhetoric.

On one hand this government is talking about Atmanirbhar Bharat, while on the other it is increasingly integrating the economy with the global value chain. The reflection of that comes out clearly in the STIP document when it talks of "reduction in corporate tax rates for foreign MNCs, fast track clearances, easing land acquisitions", etc. and the path is to be facilitated with the help of Indian Diaspora, [9.4]. It further emphasize "more focus on gaining access to the international knowledge base by importing technology in disembodied form as technological know-how will be ensured". [6.1.3]. Thus, in one hand the document talks about foreign MNCs playing "an integral role in boosting India's economy" by harnessing "the immense potential of foreign MNCs in STI and human resource development", [3.1.6] the government on the other tom-toms the idea of 'Atmanirbhar Bharat'! Is it not self contradictory?

Moreover, the article 4.1.3 of the draft clearly says that, "Team science collaboration will be facilitated between industry and academia, with shared financial resources and risks, and benefits. Industry led R & D programs in priority sectors will also be encouraged and...specific technology areas for development can be identified by a ministry or a group of ministries in consultation with industry/industry bodies." That means the government is all set to give in to the MNCs and private industries. Even in the important Government research institutes like DRDO or ISRO, it will authorize the entry of private

players under the veil of 'strategic' research. If this is allowed, the science research and development in our country will be compelled to surrender to the big business houses potentially undermining the so far announced axiom of science for our self reliance.

The draft STIP2020 further specifies that "A Strategic Technology Development Fund (STDF) will be created to incentivize the private sector and Higher Education Institutions (HEIs). Spin-off technologies resulting from the larger projects will be commercialized and used for civilian purposes." This is undoubtedly a dubious provision and it in no ways goes with the oratory of 'Atmanirvar Bharat'.

As is mentioned in the earlier paragraph the draft clearly promotes engagement and participation of industry in R & D. It is evident that the MNCs will release fund on R & D barely as per their requirements i.e. for developing profiteering technologies only and on the other hand researches on basic sciences will be heavily hampered. There are no concrete proposals in the draft to encourage and support basic science research. It seems that the political supervisory is determined to implementing the declared intent of NITI Ayaog to create five global champions. Therefore, the STI policy makers are too keen to leave the resilience and shaping of the tasks of driving and implementation of the innovation policies to the identified candidates of potentially possible "Indian MNCs".

### **An attempt to centralise S & T governance**

The STIP-2020 embraces centralization and relies on the central government sponsored and controlled policy handouts to the states and the local self-governments. It does not envisage joint planning of the innovation policies. It does not entail new forms of co-governance or cooperative federalism. The STIP-2020 does not even recognise the role of public sector, and the challenge of experimentalism in the public sector. Moreover, the draft straightway recommends, "Strong collaborations that build quality science for national problems and frameworks for such mutually beneficial collaborations at both individual and institutional level." Such verbose phrases like 'quality science for national problem' though sounds alluring, there is hardly any mention of specific problems which should be addressed at national level on priority basis. This again in reality espouses an extremely centrist approach of the STIP 2020. This approach certainly spawns an apprehension that the new STIP 2020 is fabricated to impose strict government regulations on scientific research and the researchers as well.

The STIP-2020 should have engaged with the other ministries/departments/agencies and states to strive for an increased coordination across policy levels and policy fields to improve the effectiveness of policy mixes in order to make it transformative.

### **The idea of 'Open Science' is welcome but needs caution.**

The idea of 'Open Science' is undoubtedly praiseworthy, though the path of such openness is obscure. It again gives birth to the trepidation that whether the mere mention of openness is actually a trick for taking away IPR of the individual scientists. Similarly the feasibility of 'One Nation One Subscription Policy' is not beyond suspicion. No other country in the world has such mechanism. What will be the process? Why will the large publishing houses give in to such mechanism? Common subscription in HEIs through INFLIBNET already exists - what about strengthening it further? These questions must be addressed in the draft. Otherwise such populist and hollow claims will be meaningless.

The STIP 2020 advocates formation of 1) a National STI observatory that will act as a central repository for all kinds of data related to and generated from the STI ecosystem and 2) all-encompassing Open Science Framework to be built to provide access to scientific data, information, knowledge, and resources to everyone in the country and all who are engaging with the Indian STI ecosystem on an

equal partnership basis. These are welcome. The document proposes these to be taken up under FAIR (findable, accessible, interoperable and reusable) terms through Indian Science and Technology Archive of Research (INDSTA). A critical reading suggests that the task involved in their establishment has not been properly spelt out or even understood. Open science involves semi-commons, shared infrastructures and creation of appropriate synergies. Open science will call for researchers and innovators to be monitored and evaluated. Publicly funded institutions need to be facilitated differently if the policymakers want the publicly funded science to become a connecting piece.

Again, open innovation can be an enemy in disguise and has been a global buzz word recently for science, technology and innovation. Coupling of open science and open innovation in a world where MNCs, new public management and economic neoliberal policies are ruling may be an instrument for diverting public investments into multi-national corporate R & D mechanism with a little gain for the national well being. Open data partnerships is welcome, but involving private firms, academic participants and non-experts would need to be in this system needs to be monitored closely for transparency and accountability. Engaged universities proposed in this document will remain elusive and unreal and cannot be obtained by merely establishing higher education research centres (HERC), collaborative research centres (CRC) and teaching-learning centres (TLCs) unless transformative changes are not brought in to engage with larger society and empathise with various societal maladies.

### **Draft STIP2020 promotes corporate friendly NEP 2020**

Draft STIP2020 promotes NEP 2020 where as we have already demanded scrapping of NEP 2020. Therefore, all that is wrong with NEP 2020 hold for this policy too. In chapter 2 of the draft under the header 'Capacity Building' it writes, "Innovation and Entrepreneurship Centres will be established starting from the undergraduate level of university education. Research in innovation practices will be made a mandatory component of university/college teachers' professional development program". Such jugglery of words has hardly any meaning as innovation cannot be spoon-fed overnight, rather it is a trait that needs to be nurtured and nourished from early on.

Article 2.1.11 of the draft STIP 2020 states "the transition of education to research will be strengthened by including basic knowhow – and of skills in science communication – of research as a part of every Doctorate of Philosophy (PhD) course curriculum. A framework for appropriate training and skill building in this realm will be developed for postdoctoral researchers. This will enable them to independently build their career in the STI ecosystem". Making it a compulsion for the PhD students is simply not reasonable as this will sure to overburden the doctoral student [Because science communication is not every researcher's cup of tea].

### **A covert plot to promote pseudoscience**

It is obvious that there should be provision for exploring traditional knowledge and for technology transfer in STIP of any country. But certain shady lines of the STIP 2020 such as "Mainstreaming grass root innovation and traditional knowledge systems" indicate towards covert attempt to promote as well as to empower the practice of pseudoscience. [Because, there are many examples of pseudoscience or rather anti-science projects, which have been promoted under the present Government]. The STIP 2020 must be loyal to the article 51 A (h) of our constitution to up hold the scientific temper among the people. For science popularization and developing scientific temper, the older science popularization organizations in the country need to be acknowledged and built upon rather than artificially "creating" new science movements to act at the behest of the government.

### **Uncertain financing mechanism**

The STIP 2020 strongly proposes for the creation of another agency - national STI Financial Authority and talks about government's contribution at various levels (from Panchayat to Central government). But then again it talks about creating a Bank for STI funding! This one is a snooping concept indeed.

What will the bank do? Provide loans for R & D? This is unheard of too. In the whole section there is no clear cut commitment about what proportion of the GDP or budget will be earmarked form R & D. Without mentioning explicitly it also implies as much that private capital including the MNCs will boost the GERD (3.1.5 and 3.1.6). The cat is finally out of the bag here!!!

### **Epilogue**

Finally, in the post COVID world, as a part of the STIP-2020 process only, there should be an exercise which should assess the STI ecosystems with the purpose of how they can be made to contribute to the realization of constitutional rights and help enlarge the agenda of directive principles to make them 21<sup>st</sup> century policy directives from the Indian constitution. The STIP 2020 should actually help to improve the peoples' access to systems of knowledge production to take forward the universal agenda of post-COVID world which means STI should be a provider of universal basic infrastructure (UBI) for the delivery of universal basic services (UBS), universal basic income (UBI), and universal human values (UHV) of freedom, democracy, fraternity, equality and sustainability, and not be an instrument in the hands of the corporate players, be foreign or domestic.

**Paschimbanga Vigyan Mancha**