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Title: Further discussion on the motion for consideration of the Academy of Scientific and Innovative Research Bill, 2010, moved by Shri Pawan Kumar Bansal on the 23rd March, 2011. (Bill Passed).

MADAM CHAIRMAN : Item no. 11.

â€¦(व्यवधान)

At this stage Shri C.R. Patil, Shri Jagdish Sharma, Shri Shailendra Kumar and some other hon. Member came and stood on the floor near the Table

â€¦(व्यवधान)

THE MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (SHRI VILASRAO DESHMUKH): Madam, I had a meeting with Dr. Joshi and we discussed and agreed. Most of the issues were settled. With your permission I lay my speech on the Table of the House ...(*Interruptions*)

*Madam, in the 21st century, leadership position in the field of science & technology determines the strategic positioning of a country in the global arena. Such leadership would depend on the availability of highly skilled scientific and technological human resource, poised to deliver in the cutting edge and frontier areas of natural and applied sciences. The Academy of Scientific and Innovative Research Bill 2010 is an attempt to address this challenge.

..... This part of the speech was laid on the Table

The vision of the first Prime Minister of India, Pt. Jawaharlal Nehru Ji to set up the national laboratories of CSIR across the country, IITs and other institutions led the foundation for scientific research. Our Government realizes that the time has come to build further on the strong foundation to meet the challenges of tomorrow. Therefore, we have moved to build several new IITs and institutions for science and scientific training. It has been clearly felt that the present output of trained post-graduates and doctorates in science and engineering is far from being adequate.

The Academy is reflective of our efforts to create institutions specializing in tomorrow's science which will be trans-disciplinary. It takes advantage of the large investment our Government has done in the recent years in establishing the National Knowledge Network to which all CSIR laboratories are now connected enabling interdisciplinary and trans-disciplinary collaboration across the laboratories.

The Academy is the most plausible option for achieving the target of maximizing number of high quality trans-disciplinary researchers with direct problem solving experience, in a cost- effective manner without requirement of any significant gestation period, using the existing state of the art infrastructure and leading scientists and technologists available within the CSIR frame work.

Response to Discussion:

With these remarks let me thank the Members for participating actively in the discussion and appreciating the need for a stronger S&T system to produce high quality postgraduates and PhD's in the country. I thank all the parliamentarians who have participated in the discussions.

Hon. Members have expressed a concern that the proposed Academy will have adverse impact on the University system.

This Bill is not intended to weaken the University system, but is complementary and supplementary to the good work done in the University system.

Hon. Dr. Murli Manohar Joshi Ji had expressed this concern and my predecessor had assured that this will be discussed with him. I had met with Dr. Joshi Ji and as he stated in his speech on the Bill, he wanted to have linkages between the CSIR research laboratories and the University system. I had held a meeting of several eminent scientists and

academicians of the country where Dr. Joshi Ji was also present. We discussed how the linkages that exist between CSIR and University system can be strengthened further. As an outcome of this meeting both Director General, CSIR and Chairman, UGC are engaged in discussions to tap synergies of both sectors for mutual benefit. It may be noted that the Chairman UGC is also a member of AcSIR Governing Board. I thank Dr. Joshi Ji for his keen interest, valuable suggestions and scholarly inputs.

Currently, CSIR is working extensively with University system and that collaboration will continue. CSIR programmes have benefited the University system immensely over the years. This is an organization which has supported almost every productive researcher in some way or the other whether he or she belonged to University system or National Laboratory network. The fellowships provided by CSIR have helped nurture the S&T human resource for the entire country.

CSIR, through its Open Source Drug Discovery (OSDD) has launched a Open Chemistry initiative by associating 30 universities and institutes, including IITs and universities from J&K to Thiruvanathapuram, from North East to Saurashtra, to synthesize drug like molecules for research of drugs for poor man's diseases like TB and Malaria. This is a unique research project in the world, first of its kind, which imparts education innovatively to geographically distributed students and faculty. We have ensured that there are specific clauses in the Bill which ensure the synergy between university system, CSIR and the Academy.

Clause 4 (2) of the Bill states that the Academy would focus subjects that are not ordinarily taught in regular academic Universities. Its focus is to do trans-disciplinary and interÂdisciplinary research in such areas like Mechatronics, Avionics, Fabrionics, Ayurgenomics, System and Synthetic Biology, Open Source Sustainable Energy, Green Chemistry, Smart Materials, and so on.

The Clause 5 (3) of the Bill retains the freedom of independent CSIR laboratories across the country to work with Universities and other institutions even after the Academy is in operation. Shri Vijay Bahadur Singh Ji felt the Selection Committee of the Chairman of the Board of Governors was composed of bureaucrats. The relevant Clause 12 states that selection committee shall consist of four eminent scientists and technologists of international repute, out of which two shall be heads of international societies, academies or similar organizations in the field of science and technology. This clause is reflective of the government's commitment to ensure that the selection committee is completely professional whereby persons of highest quality get selected as the Chairperson of Board of Governors of the Academy.

Shri Prabodh Panda Ji stressed on the need for autonomy. The Board of Governors of the Academy as provided in clause 11 of the Bill is composed of scientists and technologists and other persons of high eminence. This will ensure academic and administrative autonomy.

SK. Saidul Haq Ji cautioned us that marks alone should not be determinative in the Academy. Clause 4(3) provides that the curricula, pedagogy and evaluation of the Academy shall be innovative and directed to creating highest quality personnel with cross disciplinary knowledge. Thus the knowledge space occupied by the Academy is unique which sets it apart from other conventional institutions.

Shri Mahtab Ji wanted non degree programmes and skill development programmes. The Bill empowers the Academy to do so and the Academy may introduce such courses in advanced areas of science and technology.

Shri Shailendra Kumar Ji and Dr. Joshi Ji pointed to the need to promote socially relevant innovations. CSIR has initiated a programme called CSIR-800 specifically with the objective of developing applications of technologies with social relevance for economic empowerment of the almost 800 million Indians, the relatively deprived sections in rural and urban population. An example is Soleckshaw, the pedal assisted electric powered cycle rickshaw for rickshaw pullers. All PhD students of the Academy would be required to undergo a compulsory internship in a CSIR 800 project focused at bringing in S&T intervention for the benefit of our brethren at the bottom of the economic pyramid. They will work with Micro, Small and Medium (MSME) enterprises to foster innovation in that sector. I thank Shri Mulayam Singh Yadav Ji and Shri Ninong Ering Ji for supporting this Bill.

Madam, in India, we have traditionally had a hunger for knowledge and a reverence for science. Learning was revered. Knowledge was respected. Education is empowerment. We have to build on this foundation to make India a knowledge superpower in the frontier areas of Science and Technology.

As the twenty-first century unfolds, we are called to meet the new challenges of a global economy. It requires innovative thinking, comprehensive understanding and superior communication. Science and technology education is the foundation of this opportunity.

We are in the decade of innovation. We need our researchers to be innovative. We need our institutions to be innovative. We need to learn the art of converting inventions into innovations faster and then create an enterprise around it.

CSIR has been the fountain head of nation's innovation through the decades, providing innovations for our daily use, from the indelible ink used in our democratic process' to some of the tractors that plough our fields, the Mark II pump we pump the water, from generic drugs to genomic medicine, from oceanography to aerospace, supporting mushroom farming in north east to lavender farming in Jammu and Kashmir, and working with people in the remote parts of India where CSIR

laboratories are located. More than 90% of the US patents held by public funded institutions in India are held by CSIR with several of them have been commercialised. I am proud to say that CSIR scientists actively support the space and atomic energy programmes.

Madam, we need to be globally competitive in science and technology. We need to transform the research in science and technology to one that constantly strives for excellence. We need institutions that will prepare our researchers for the 21st century. We want our doctors to learn engineering skills, engineers to address biological challenges, chemists to learn physics, mathematicians to learn biology and so on and solve problems facing our society.

Through the Academy we are opening the world-class infrastructure of CSIR which is a national resource, painstakingly set up over the years, and its highly talented internationally recognized faculty, some of whom are best in the world, to our students. This will attract the best students to remain in the country and we will train them in the frontier areas of science and technology, enabling them to out-compete and out-innovate the rest of the world.

Madam, Pandit Nehru Ji said that 'science and technology alone has the power to change our destiny'. This Bill is reflective of the commitment of our government to shape our destiny, to be leaders in science and technology, than be passive spectators. We need to educate to innovate and to innovate to educate. We cannot prepare our researchers for 21st century science and technology by sending them through the doors of 20th century systems alone or losing them to institutions of higher learning abroad.

Our youngsters have brilliant minds. Given the right environment and facilities they can match up to the best minds of science. The Academy is instituted to secure India's leadership in tomorrow's science. I urge our youngsters to take up this challenge of securing our leadership. We need to out- innovate, out-educate, and out-perform the rest of the world.

The Academy of Scientific and Innovative Research Bill 2010, is our government's attempt to secure India's leadership in tomorrow's science and technology, in the fields of integrative and trans-disciplinary areas of science and engineering. With these words, thanking all the parliamentarians who participated in the debate and saluting all the teachers of science and technology on this Teacher's Day and I commend this Bill for passing.*

Madam, I beg to move:

"That the Bill to establish an Academy for furtherance of the advancement of learning and prosecution of research in the field of science and technology in association with Council of Scientific and Industrial Research and to declare the institution known as the Academy of Scientific and Innovative Research, to be an institution of national importance to provide for its incorporation and matters connected therewith and incidental thereto, be taken into consideration."

MADAM CHAIRMAN: The question is:

"That the Bill to establish an Academy for furtherance of the advancement of learning and prosecution of research in the field of science and technology in association with Council of Scientific and Industrial Research and to declare the institution known as the Academy of Scientific and Innovative Research, to be an institution of national importance to provide for its incorporation and matters connected therewith and incidental thereto, be taken into consideration."

The motion was adopted.

...(*Interruptions*)

MADAM CHAIRMAN: The House now takes up clause-by-clause consideration of the Bill.

The question is:

"That clauses 2 to 38 stand part of the Bill."

The motion was adopted.

Clauses 2 to 38 were added to the Bill.

Clause 1 Short title, extent and commencement

Amendment made:

Page 1, line 3,--

for "2010"

substitute "2011" (2)

(Shri Vilasrao Deshmukh)

MADAM CHAIRMAN: The question is:

"That clause 1, as amended, stand part of the Bill."

The motion was adopted.

Clause 1, as amended, was added to the Bill.

...(*Interruptions*)

Enacting Formula

Amendment made:

Page 1, line 1,--

for "Sixty-first"

substitute "Sixty-second" (1)

(Shri Vilasrao Deshmukh)

MADAM CHAIRMAN: The question is:

"That the Enacting Formula, as amended, stand part of the Bill."

The motion was adopted.

The Enacting Formula, as amended, was added to the Bill.

The Long Title was added to the Bill.

...(*Interruptions*)

SHRI VILASRAO DESHMUKH: Madam, I beg to move:

"That the Bill, as amended, be passed."

MADAM CHAIRMAN: The question is:

"That the Bill, as amended, be passed."

The motion was adopted.

...(*Interruptions*)

MADAM CHAIRMAN: The House stands adjourned to meet again tomorrow at 11 a.m.

16.04 hrs

The Lok Sabha then adjourned till Eleven of the Clock

on Tuesday, September 06, 2011/Bhadra 15, 1933 (Saka).