

Science and technology policy—2003

The Government has unveiled a new Science and Technology Policy Statement which follows in the footsteps of the Scientific Policy Resolution (1958) and Science and Technology Policy Statement (1983). After intensive dialogue involving scientists, technologists, social scientists, activists, politicians, administrators and concerned citizens which also involved a draft on the web for discussion, the final version has been approved and announced at the 90th Session of the Indian Science Congress at Bangalore.

The main policy objectives are to advance scientific temper and fully integrate science and technology into all spheres of national activity on a sustainable basis. It would foster scientific research in universities and other institutions and create suitable employment opportunities in the S&T sector. Women would be ensured full and equal participation. There would be necessary autonomy and freedom of functioning for academic institutions. Full potential of science would be harnessed to accomplish national strategic objectives with encouragement for research and innovation in areas of relevance for the economy and society. Mechanisms would be strengthened for technology development evaluation, absorption and upgradation from concept to utilization. An IPR regime would be formulated for speedy and effective domestic commercialization of such inventions. Special emphasis would be placed on forecasting, prevention and mitigation of natural hazards. International cooperation would continue to be encouraged.

Briefly, the key points of the strategy and implementation plan of the policy—2003 are:

1. Science and technology governance and investments: This would involve mechanisms to obtain science and technology planning inputs on a continuous basis from a cross-section of the scientific community. Also, an allocation in a certain percentage would be made by each of the socio-economic ministries for relevant programmes and states would be encouraged to use science and technol-

ogy for developmental purposes. Universities and institutions would be given full autonomy, flexibility and de-bureaucratized. It would be ensured that all 'highly science-based ministries and departments of the government would be run by scientists and technologists'. There would be continued existence of the apex S&T advisory body. While the Government would be committed to make the necessary budgetary commitments to raise the level of investment to 2% of GDP, it would be essential for industry to also steeply increase its investments in R&D.

2. Optimal utilization of existing infrastructure and competence by networking of existing infrastructure.

3. Strengthening of the infrastructure for science and technology in academic institutions: Appropriately sized science laboratories would be supported in academic institutions with flexible mechanisms for induction of new faculty in key areas of science.

4. New funding mechanisms for basic research: These would cater to the promotion of basic research in science. There would be simplification of administrative and financial procedures.

5. Human resource development: Along with schemes to nurture and attract talent there would be encouragement for quality and productivity in science by mobility of scientists and technologists between industry, academic institutions and research laboratories. This is to be supported by substantial funding, retraining and reskilling. Women's needs would be met through flexibility in rules and regulations. Scientists of Indian origin from abroad would be encouraged to return to India and their networking facilitated.

6. Technology development, transfer and diffusion: An aggressive bench-marking of technologies would be carried out along with adoption, diffusion and transfer of innovation to the productive sectors. An enhanced push would be given to Indian industry to avoid non-tariff barriers in global trade. Training in all aspects of technology management would be initiated in IITs, IIMs and other institutions.

7. Promotion of innovation: Support in all respects would be given for a comprehensive national system of innovation.

8. Industry and scientific R&D: For increasing synergy between academia and industry, 'Autonomous Technology Transfer organizations' would be created in academic institutions to facilitate transfer of know-how generated to industry. Industry would be supported by fiscal and other measures to carry out R&D.

9. Indigenous resources and traditional knowledge: Development of technologies that add value to India's indigenous resources would be supported and the Indian share in the global herbal product market would be increased.

10. Technologies for mitigation and management of natural hazards: A concerted plan for enhancing predictive capabilities and meeting emergencies in natural disasters would be made.

11. Generation and management of intellectual property: The fullest protection to competitive intellectual property from Indian R&D programmes would be made.

12. Public awareness of science and technology: Keeping in mind the need for increasing public awareness of the importance of science and technology in daily life and the directions which science in frontier areas is taking, popularization of science and dissemination of information would be encouraged. A closer interaction between sciences and social sciences would be assisted.

13. International science and technology cooperation: Those international collaborative programmes contributing directly to India's scientific development and security objectives would be encouraged.

14. Fiscal measures: Innovative fiscal measures are planned and strategies for attracting higher levels of investments both public and private in science and technological development.

Finally, the crux of any policy which is effective implementation would be put in place by expeditious, transparent monitoring and reviewing mechanisms. The Policy—2003 hopes to build a 'new India' which 'uplifts the Indian people and indeed all of humanity'.

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