

Science and Technology Governance in Pakistan: The Role of Parliament and Other Policy Makers

Pakistan inherited four laboratories, one university and one agricultural college at the time of independence in 1947. Since its inception, Pakistan realized the importance of science and technology for socio-economic development, however, due to various reasons, mainly financial constraints and political instability in the country, science and technology could not become the priority agenda of successive governments. Despite these constraints, considerable progress has been made in science and technology. At present, there are 83 major S&T organizations with over 224 laboratories and research stations in Pakistan working in different areas of science and technology. In addition, there are 109 universities in the country, about half of which are in the private sector.

For making the role of parliament in the development of science and technology more efficient and well-organized, various mechanisms have been devised in Pakistan. In this regard, the National Commission for Science and Technology (NCST) is the most important institution which was created in 1984. The 27-member Commission is the apex Science and Technology policy laying body that provides guidance for scientific and technological efforts in the country. It has a cross-cutting function of determining policy across many government ministries and agencies and, it does not have any administrative function. The Commission is headed by the Prime Minister of Pakistan and includes Federal Ministers for Science and Technology, Education, Agriculture, Industries and Finance along with Ministers for S&T Departments of the provinces. Federal Minister for Information Technology and Telecommunications, who is currently not a member of NCST, is also being included in the Commission.

The Commission has an Executive Committee that is responsible to coordinate, oversee and review the Science and Technology policies, research and development programmes and implementation of the policy decisions taken by the Commission. The Executive Committee is headed by the Federal Minister for Science and Technology and

consists of 29 members, mainly secretaries of ministries concerned and heads of science and technology organizations.

Pakistan Council for Science and Technology is the designated secretariat of NCST and in this capacity, it plays a very important role in the science and technology policy formulation and decision-making process. Chairman, PCST, supported by a small technical workforce, serves as the Secretary of the Commission.

Both house of parliament, i.e. National Assembly and Senate, have Standing Committees on Education, Science and Technology. Presence of these Committees provides political oversight over the functioning of the science and technology organizations in the country. These Committees which include parliamentarians from the ruling party and the opposition examine the administration, legislation, expenditure, public petitions and policies of the Ministry and its associated organizations. Recently, a Sub-Committee of the Senate Standing Committee on Science & Technology considered the issue of linkage between Industries and Research Institutes. The Sub-Committee gave constructive recommendations for constitution of framework and mechanism for the linkage between Industries and Research Institutes of Science and Technology so that the benefit of scientific research may reach to Industries, Agriculture and the common man.

Ministry of Science and Technology, created in 1972, is the focal point on all important matters regarding science and technology including developing science and technology policies and plans and, coordination of science and technology at the government level. Keeping in view the importance of Information Technology and acknowledging its central role in the future economic progress, recently a separate ministry was created for Information Technology and Telecommunications. Other important federal ministries with regard to science and technology are ministries of Education, Agriculture and Industries. Their Ministers have a central position in the decision-making process and play an important role in the Science and Technology policy development as members of NCST.

Higher Education Commission (HEC) and Pakistan Atomic Energy Commission (PAEC) are other important bodies where science and technology decisions, pertaining to

their spheres of work, are made. Both the organizations are also represented on the NCST through their heads. Chairman, HEC, who has recently been posted as Advisor to the Prime Minister, is responsible for higher education, including education, research & development in basic and applied sciences and engineering & technology. He works independently of the Minister for Education, who is mainly responsible for the primary and secondary education. Chairman, PAEC is under the Prime Minister's Secretariat and is a key-figure in science and technology decision-making process related to the defense and security of the country.

There are a significant number of Research & Development organizations, mainly in the area of agriculture, working under the administrative control of the provinces. Policies and decisions regarding these organizations are normally made in the concerned provincial departments. While heads of science and technology organizations working under the administrative control of different federal ministries, mainly science and technology and, agriculture, are responsible for governance of these organizations at the local level.