

# Science and Technology in Pakistan

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PCSIR.  
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Higher government functionaries who generally set the policy tune, including the Prime Minister and the President of Pakistan, have focused their keynote addresses, many a time, on Science and Technology and its applications and uses in various fields and this emphasis is often repeated at different government levels after a short spell of time. This has kept the development of Science and Technology and its numerous benefits for Pakistan industry alive. The opening of many new Universities placed greater emphasis in this field and our many talented students, impressed by this scientific awareness, enrolled themselves in various fields to play their respective role in the expected Scientific Revolution in Pakistan in the near future. In 3-4 years, Pakistan along with other developed and developing nations, will be entering the 21st century, and it makes it all the more necessary for Pakistani scientists to be fully prepared to face the scientific and technological challenges of the 21st century. After all, the present difference between the developed and the developing world is mainly the degree of adaptation of practical aspects of science and technology; the developed countries making use of its scientists and scientific research while developing nations neglecting its scientists and their scientific findings on their own

respective soil but instead open way for talented scientists to work on the soil of developed countries, ultimately leading to brain drain.

When Pakistan appeared on the global map in August 1947, there was no scientific organisation or worthwhile research or industrial laboratory and only a handful of Pakistani scientists, many of whom have migrated from India. To take the initiative, Pakistan Council of Scientific and Industrial Research (PCSIR) was formally created in 1953 by the Government of Pakistan with the major objective of assisting in the expansion of industrial base through research and development to meet the new challenges of independence. Initially, there were six research laboratories of the PCSIR; three being in the former East Pakistan. At present, the PCSIR is based on its four multi-disciplined laboratories located at Karachi, Lahore, Peshawar and Quetta and five monofunctional units related to Leather, Fuel, Solar Energy, Physical Standards and Precision Mechanics located at Karachi, Lahore, Peshawar, Hyderabad and Islamabad have since been established.

The PCSIR is the biggest scientific and industrial research organisation in Pakistan and carries out Research and Development (R&D) on various subjects, particularly those of interest to

our industry, including ores and minerals; food and fruits; plastics and polymers; energy and environment; oils and fats; and drugs and pharmaceuticals. Currently it employs about 2,800 personnel, including about 800 scientists and engineers, who in turn include 150 Ph.Ds.

In 1953, the PCSIR was headed by its first Chairman, Dr. Salimuzzaman Siddiqui and its chief planner was Dr. Bashir Ahmad, former Vice-Chancellor, Punjab University, who was appointed the first Director of its Lahore Laboratories. From the start, the PCSIR ran into difficulty when Dr. Bashir Ahmad died in 1957 without giving much scientific momentum to the newly-created organisation. The first task

before Dr. Salimuzzaman was to create a solid and trained scientific nucleus who could un-

dertake research work in different units of the organisation. For this purpose, selected scientists were sent abroad for training and higher academic degrees and on their return, their salaries were increased to four-fold without the creation of new posts and increased salary budget. This resulted in funneling funds meant for research work to meet the payment of enhanced salaries of the trained staff, leaving virtually no budget for R&D. The Ministry of Finance remained absolutely unconvinced

about the early achievements of the PCSIR as the Ministry has no vision to recognise that creation of solid scientific base in itself is an excellent achievement in a country like Pakistan where there was a complete scientific vacuum immediately after independence. In spite of Pakistan Government's unconvincing attitude, the Royal Society of England in recognition of great efforts of Dr. Salimuzzaman Siddiqui for the spread of scientific research in Pakistan, elected him as its Fellow (FRS). However, this did not solve the internal bureaucratic administrative problems for the smooth running of this great scientific organisation which has all the potential to tackle Pakistan's scientific and industrial problems. It will be interesting to note that many distinguished scientists began their early scientific career in the PCSIR Laboratories. Some of these are: Prof. M. Akhtar, FRS, now working in Southampton University, England; Dr. Khurshid A. Malik, now working in DSMZ, Germany; Dr. M. Hanif, who distinguished himself in the field of environment and found his way to 33-member Council of Environmental Protection; distinguished Pakistani Physicist Dr. M.M. Qureshi; distinguished Pakistani scientist Dr. Amir Muhammad and late Dr. M. Khurshid Bhatti who was the foremost industrial chemist of Pakistan.

(To be Concluded)

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