

## WELCOME ADDRESS

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PAKISTAN ASSOCIATION OF SCIENTIST & SCIENTIFIC PROFESSIONS

**A. H. Chotani – Vice President Pakistan**

**Hotel Metropole, Karachi**

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**PROF. KHURSHID AHMAD**



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By A.H. Chotani

Professor Khurshid Ahmad, Federal Minister for Planning, distinguished guests, ladies and gentlemen,

It is my proud privilege to welcome you, Mr. Minister and other distinguished guests on behalf of the Pakistan Association of Scientists and Scientific Professions, to this function. We are indeed grateful to you, Mr. Minister, for having spared the time to be in our midst this evening inspite of your numerous engagements to address us on the Role of Scientists and Technologists in national planning.

It would not be out of place to briefly describe the background of the efforts made during the past few years to create a linkage between scientific organizations and the Planning Commission. In 1968 there was a considerable debate in the National Science Council, a coordinating body set up by the Government<sup>9</sup> to raise its status so that it could be considered as the Science Policy Making Agency of the country and could hold meaning-full dialogue with the planners of the Planning Commission, in order to inject scientific and technology are indispensable instruments for economic development of the country, it was agreed by the Planning Commission to include a separate chapter on science and technology in the Five Year Plan.

Although this formal recognition of the importance of science and technology is commendable, there are certain features of this approach which deserve to be carefully considered. One of them is that the chapter on science and technology as presently drafted is drawn up from the relevant sectors of the activities covered in other chapters such as agriculture, health and industry. This means that the chapter does not exist in its own right but is in fact prepped up by other chapters. This state of affairs does not appear to be satisfactory. The best way of coordinating the efforts in effective manner would be to create a section of science and technology in the planning commission on the pattern of other sections. This would lead to the appointment of a suitable person who would be responsible for pursuing the projects for the promotion of science and technology at various levels for speedy approval and implementation. The chief of proposed Science and Technology Section could also be assisted by Standing Technical Committees which could be set up by the Planning Commission for specialized fields in consultation with the Ministry of Science & Technology and other agencies concerned.

As for the National Science Council, it is indeed unfortunate that it has been relegated to unintended neglected spot. In spite of the important role envisaged for it in the report of the Scientific Commission set up by the Government, as far back as in 1959. It is our view that this body should emerge, as a supreme; coordinating body with clear cut powers and authority, in order to make its role truly effective. One way of achieving this objective would be to make it obligatory for all Research Councils to get budgetary clearance from the National Science Council which should be headed by the President of Pakistan and should be charged with the responsibility of providing matters pertaining to the planning and implementation of science and technology policies in the country.

It would also be in the fitness of things to review the present status of research councils and other research institutes functioning under different ministries. It has been recommended for the past several years by many bodies like the PASSP, Pakistan Academy of Sciences that research efforts

should fall under the purview of the Ministry of Science and Technology. Unfortunately this recommendation has so far been partially recommended and only certain councils such as the PCSIR, Medical Research Council, Irrigation Research Council and Council for Housing and Works presently fall under the Ministry of Science and Technology. It is strongly felt that a more effective coordination of research activities should be brought about by pooling all Research Councils in one Ministry. This would facilitate the holding of meaningful dialogue with the National Science and Technology Council relevant agencies in the Government and result in a coordinated efforts for promotion of science and technology endeavour.

In the strategy for the development of science and technology for the Fifth Plan it has been recognized that efforts have to be made to build speedily and adequate, effective and efficient science and technology system and to ensure that the system is directed towards achievement of national security. It has also been suggested in the proposed strategy that the first priority will be given to enhance the level of self-reliance in science and technology and to make concerted efforts to encourage and improve the indigenous capabilities.

Inadequate interaction between our scientific and technological system and the productive structure of our economy has harmed both. In the past, there has been large scale induction of equipment and machinery, intermediate materials, spares, components along with a great deal of process know-how involving horizontal transfer of technology both with credit, aid, export earning and foreign equity. The very limited use of local science and technology efforts even towards adapting imported technology and equipment to indigenous resources and needs has perpetuated this dependence. The benefits have accrued largely to the large cities to the neglect and sometime at the expense of the rural areas. It would be unwise to rely on solutions which heavily depend on scarce materials and are prevalent.

One of the objectives outlined in the Fifth Plan is the allocation of adequate financial resources for the creation and strengthening of the research institutes in accordance with the ever-all plan. It is strongly felt that this aspect of the policy should be clearly spelt out clearly and unequivocally in monetary terms. The present investment in effort is of the order of 0.15 per cent of the GNP as against the internationally recognized minimum investment of 1 per cent of GNP. The result of this meagre allocation is that most of Research Institutes are literally paralysed for want of funds. Highly trained scientific and technological manpower available in the research establishment is consequently lying idle. The present position is that 80 to 90 percent of the budget of research institutes is being expended on disbursement of salaries, leaving only 10 to 20 per cent for operational expenses. In the sanctioning of projects and in the allocation of funds for existing institutions it is strongly recommended that at least 50 per cent of budgetary allocation should be available for carrying out research and development, while the balance of 50 per cent should be for establishment charges. In making these allocations, due cognizance should be taken of the requirements of equipment pilot plants and spare parts.

In proposed Fifth Plan a total allocation of 1938 million has been made for science and technology and it has been stated that allocation of research and development accounts for 1.3 per cent of the total public sector investment programme in the Fifth Plan.

It is our belief that this allocation is meagre and that is necessary to raise the level to 1 per cent of the GNP as stated earlier. This may correspond to nearly 3 percent of the total public sector investment programme. Furthermore without a categorical assurance for the proper and constant

flow of funds, it would not be possible to expect the desired results from the scientists and technologists of the country.

Scientific and technological manpower has now emerged as an international commodity. Per arresting brain drain of highly skilled manpower, it is our conviction that the scientists and technologists should be given special cadre which may be called as Scientists and Technologists Cadre. The benefits which should accrue to them should in no way be less than those of other production units and autonomous corporations. As an immediate measure, the wide disparities and anomalies in grades in the existing research organisation for scientists and technologists of similar qualifications and experience should be removed.

It would also be necessary to allocate substantial funds to research institutes for setting up pilot plants and for undertaking semi commercial production in order to test the economic feasibility of the laboratory processes.

Another serious lacuna in the existing institutional framework is the lack of an effective mechanism for ensuring better utilization of results of research. It is felt that the Planning Commission could play an important role in this regard by incorporating suitable measures in the Plan for protecting local efforts against imported technology for maximum utilization of indigenous research efforts.

Several proposals have been made in this connection from time to time including the setting up Research and Development Corporation for underwriting the risks of investors, it is proposed that the establishment of a high-powered import substitution Committee may be considered. Such a Committee could take stock of local technology available for manufacture of various items on the basis of development carried out within the research establishments of the country and only such items should be imported for which local technology may not be available. This would be an important step towards the achievement of tasks outlined in the strategy for science and technology in the Fifth Plan for enhancing the level of self-reliance in science and technology development of indigenous capabilities. In this context, the Government could play an important role in regulating the transfer of technology from the developed countries to Pakistan. Terms of agreement signed between various consulting firms and their counterparts in Pakistan should make it obligatory that the local technologists would be given every opportunity to learn the details of design and fabrications of imported equipments, so that it would be possible to manufacture these components within the country over a reasonable period with the main object of self-reliance.

In addition to promotion of local technologists, there is no reason why local consultancy services should not be encouraged and technologists give adequate loans to set up their own industries. The crux of the problem is that we have to fully mobilize our technical talent which, in many instances, is wasted because of the lack of incentives and support.

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