S&T priorities sho aim for self-relian

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T is universally agreed that the people in Thar and Balochistan would not have to face the calamity they experienced in the recent past, if only our policy-makers had given due importance to exploiting the existing natural resources water, agriculture, and minerals in these parts of the country.

The third quarterly report (July 1999-March 2000) of the State Bank of Pakistan comments: "The performance of the manufacturing sector is drastically low.'

"The factor of economic recovery is still elusive," opines a newsreport.

There is a long list of sick industries in the country. The industrial produce, whatever is there, depends on imported raw materials and outdated technology. Being such, it is just not competitive in the export market.

Our industrial sector is unsupportive of the national economy. We are ditched into such an economic crisis that even the economic viability of the country is now in imminent danger.

Global realization: There is a global realization that industrialization is the only way to stabilize the dwindling economics of the Third World countries as it provides for an expanding population, raising the standard of living, and for national defence.

Major needs for industrial development of any country are: an adequate and continuous supply of raw materials, current technology and cheap energy. Fortunately, our country has tremendous potential to be selfsufficient in all these. But, unfortunately, our economic planners are trained only to work with IMF loans and foreign consul-

Lesson from history: At this critical juncture, we desperately need to learn from our history. it Let us recall the state of affairs in 1947, when this country was in its infancy with no shape of economy, no industry; its indigenous resources lying unearthed, and a host of problems for its leadership to face.

In those circumstances, our leadership decided to face the challenges with courage and conviction. They had the will, vision and competence to build the economy of Pakistan from scratch. Chaudhry Mohammad Ali, an economist and a qualified scientist, and a politician with vision, decided to plan Pakistan's economy with science and technology as an essential component. As the entire econo-

the Commission.

During the same period, such significant organizations as the Food and Agricultural Research Council and Medical Research Council were established. Scientific research institutions were then set up to meet the R&D needs of country. Two main goals were set for these R&D

OPINION

bodies: (1) exploitation of indigenous resources; (2) development of relevant technologies.

The foundation for Pakistan's industrial and economic development was thus already laid with-

Atomic Energy resources and reduce the giv demands on capital. But technology can only grow out of the study of science and its applications.

> Indians followed these outlines while we neglected them. So they could secure tremendous increase in their industrial output, agricultural produce, industrial development and defence capabilities during these years. Once deficient in food-grains, India is now world's fourth largest producer. Its turnkey plant and defence production has a good market. It has a very large number of industries based on indigenous resources and know-how. The R&D activity is streamlined and being carried out in a network of laboratories and field stations spread all over the country. MNCs like CIBA, Hoechst, Boots and Lever have their own research units based on local raw materials in India.

Pakistan's priorities: Meanwhile Pakistan, over these five decades, has added a number of S&T research and development institutions to the PCSIR and the councils created in fifties. The number has now grown to over 170 under a number of different federal and provincial ministries. The number of universities has also increased along with centres of excellences in various fields of science. Pakistan, therefore. maintains a huge S&T infrastructure. All these institutions are expected to carry out R&D activ-

es in a variety of fields. However, projects in these institutions are merely shortterm assignments with no bearing on the real needs of national economy, and with no relevance to the national economic effort. Research work conducted in these institutions in not coordinated. Actually, it is haphazard and unsupportive of the industrial productivity and the economic growth in the country. There are no R&D facilities available to the industry.

This state of affairs has resulted in the present state of economic depression, which has

To re-orientate the existing S&T infrastructure, to mobilize it, and to support the industrial growth in the country, the ministries of planning, and science and technology shall have to do some homework

my of the country at that time depended on two major cash crops, cotton and jute, he decided to exploit these two resources for Pakistan's economic growth. In 1948, Pakistan Central Cotton Committee was created, followed immediately by an Institute of Cotton Research at Karachi and then Food and Agricultural Research Council (in 1949), and the Central Jute Committee (in 1950) - which ran a Jute Research Institute at Dhaka, East Pakistan.

Pakistan Industrial Development Corporation (PIDC) was established in 1952 and Pakistan Council for Scientific and Industrial Research (PCSIR) in 1953, with its laboratories in the two wings of the country.

In 1956, the Atomic Energy Council was set up - and under

in the first few years of the country's inception. As a result. remarkable progress was made in both private and public sectors. Industry's contribution to national income increased manifold, and Pakistan became an economically viable state.

On Indian side: On the other side of the border, the Indian parliament acknowledged the importance of technology in its Science Policy resolution, passed in 1958. It said: "The key to national prosperity, apart from the spirit of the people, lies in the modern age, in effective combination of 3 factors, technology, raw materials and capital, of which the first is perhaps the most important since the creation and adoption of new technologies can in fact make up for the deficiency in natural

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This state of affairs has resulted in the present state of economic depression, which has given birth to numerous other issues such as sick industry, unemployment, budgetary and trade deficit, increase in the burdens of foreign debt and non-productive expenditure.

Prof J D Burnel, FRS, had once said: "Science in its past heroic age got on without planning. It just grew by accretion with bits added here and there, under the stress of immediate needs or according to the 2 es of the individual ger scale of science toda, that there is no going b haphazard science. haphazard science.

In Pakistan, the S& efforts, therefore, n goal-oriented, and inputs to the econom the country. Being a country with meag the country cannot a the huge load of d R&D with no refere trial or economic gre

The challenges t faces today are nu have no option around, and turn laid down by the for nation for an industr with S&T input base. nous resources. We, need to resettle our page science and technology of ment for economic self-rel

To re-orientate the exist S&T infrastructure, to mob it, and to support the industra growth in the country, the min istries of planning, and science and technology shall have to o some homework and dish or only targeted S&T projects for our scientists to work on. N more beating about the bush!

With an elaborate infrastruc ture in S&T (R&D) existing in the country, there is no justification for a sick industry, unexploited indigenous resources, rising unemployment or a failing economy. We are not building the national economy from scratch.

The writer is former secretary, science & technology, government of Pakistan

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