

# New tools for development

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Fifteen years ago, when our marvelling world discovered the space age and a host of new technologies, it immediately began to envision the enormous possibilities offered by science and technology. Third World countries, a great many of which had just achieved their independence, saw therein a means of accelerating their development, and in 1963 the United Nations conference on the application of science and technology for the benefit of underdeveloped regions gave cause for even greater hope.

Fifteen years have gone by and the sad fact is that science and technology have not lived up to expectations and that the gap between rich and developing countries has scarcely been bridged. Something has gone wrong.

The United Nations has therefore decided to hold another conference in Vienna in August 1979 on the even more specific theme of "science and technology for development" (UNCSTD). This time, science and technology will be considered as instruments, not as ends in themselves. Of course, science and technology have made tremendous progress between 1963 and 1979, but there have also been moments of doubt, questioning and hesitation. What science? What technology? For whom? Why? Some have even claimed that there is fundamental opposition between technology and quality of life. This far-reaching reflection has been as intense in developed countries — particularly during the student riots at Berkeley and those of May 1968 in Paris and Germany — as in Third World countries, and it has brought about an important change of attitude toward international development assistance. Today, participants in international conferences speak of "technical cooperation between developing countries", which was the theme of the 1978 United Nations conference in Buenos Aires, of a code of conduct to regulate technological transfer, and of a revision of international patents agreements, in short, of a new scientific and technological order that would result from a new world economic order.

The type of technological transfer made in 1963 and symbolized by the building of turnkey factories has now been replaced by an increasingly apparent determination on the part of recipient nations to choose appropriate technologies and adapt them to their own economic, social, and cultural contexts.

It is doubtless a sign of the times that midway through this transition period Canada founded the IDRC, a new type of organization whose the basic objective was to meet the expectations of Third World countries. The concept of promoting research in developing countries, particularly research done by local teams according to their own priorities, was actually an innovation on the international development scene. The Canadian experiment has been

followed closely by developed countries, international organizations, and especially Third World countries, which have viewed it as a genuine effort to gear assistance to their own wishes.

During its eight years of existence, the IDRC has undertaken some 800 projects around the world and has proved beyond a doubt that science and technology can be used for improving living conditions in rural areas of developing countries while contributing significantly to the development of the infrastructure and local skills without which any technological transfer is impossible. The examples described in this dossier show that in every aspect of scientific and technological activity — from agriculture to information systems to health care — it is possible to transfer and communicate knowledge as well as promote the development of local research teams which will be able to work in harmony with their socio-cultural context and make a more consistent and sustained contribution to their country's development.

It is still too early to foresee the result of next year's Vienna conference. Let us simply hope that it will destroy the myth that science and technology are all-powerful and can alone solve every development problem. Politicians and other leaders should take this opportunity to learn that science and technology become effective tools only if a certain number of prerequisites have been met. Political will, a national scientific and technological policy, infrastructures and human and financial resources, for example, must all be present. Scientists, for their part, may discover that the practical problems of developing countries are too important to ignore any longer and that, since 90 percent of the research done in the world is on problems of developed countries, it would only be fair to devote a larger percentage to problems of Third World countries.

The task is not an easy one. Nevertheless, the IDRC's modest effort suggests that significant results may be achieved in the transfer of science and technology with relatively small investments. If the IDRC experience can attract the attention of other countries and stimulate the establishment of other such organizations and instruments, the contribution of science and technology will increase, thus enabling international development to forge ahead.

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