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Scientists and World Needs

Scientists have a long tradition of international cooperation. Initially their interaction was based on admiration for scientific contributions. With time the intensity and scope of interaction have increased. Air travel and the telephone have multiplied the opportunities for meaningful contacts, mutual respect, and friendships. In consequence scientists have tended to be unusually internationally minded.

Until the last decade cooperation among scientists was focused strongly on fostering science. But now substantial emphasis is being directed toward important world problems. In seeking to be helpful in meeting human needs elsewhere, scientists have discovered that the practical problems are complex and difficult; quick solutions are enormously costly. The world's scientists possess a substantial fraction of relevant intellectual capacity; they have very little control of funds.

Under such circumstances, it would be easy to become frustrated. But this has not happened; rather the tempo of organized efforts has increased, stimulated in part by the forthcoming United Nations Conference on Science and Technology for Development. But activities by scientists will go on long after the meeting at Vienna in August 1979.

An important focus of the continuing efforts will be the International Scientific Unions. One example of activities involves the International Union of Pure and Applied Chemistry (IUPAC). Its activities are carried out by 1500 experts from 43 member countries who cover the spectrum of chemistry-related sciences and technologies. For most of its 59 years of existence the Union devoted its efforts to the regulation of atomic weights, chemical nomenclature and symbolization, analytical procedures, and standard methods of assay.

But IUPAC has recognized that though such activities are useful they are not enough, and it has created a mechanism designed to aid in identifying and solving problems of chemistry having direct impact on human needs. The effort bears the title Chemical Research Applied to World Needs (CHEMRAWN). IUPAC's initial enterprise under CHEMRAWN is a first World Conference on Future Sources of Organic Raw Materials. This major conference will discuss alternatives to petroleum as future sources of chemicals and chemical feedstocks. The conference, to be held in Toronto from 10 through 13 July 1978, will be attended by world leaders from government, industry, and academia. They will seek to define those factors that will determine the sources of organic raw materials at the end of this century.

Another example of effort by the scientific unions is an activity spearheaded by the umbrella organization for all of them—the International Council of Scientific Unions (ICSU). Through ICSU initiative, a number of nongovernmental organizations including those of engineers and social scientists will host a symposium in Singapore during late January 1979 that will involve participants from many countries. Objectives of the meeting include identification of substantive inputs into the U.N. Conference on Science and Technology for Development. Of more lasting consequence is exploration of institutional and other innovations which would enlarge the opportunities for scientists and engineers to participate in future years in the improvement of the human condition. One of the important objectives of the symposium is to illuminate the basic conditions necessary for the assimilation of science and technology into developing countries in a manner which significantly contributes to the development process. The symposium will explore such questions as "How can a systematic approach be made country by country to selection of technology relevant to it?" Such an approach is required because the various nations differ greatly in educational levels, technological know-how, internal markets, natural resources, financial strengths, managerial talents, and political climates.

Scientists cannot do everything, but if they select limited and doable objectives, they can make a meaningful difference.—PHILIP H. ABELSON