The United Nations Expanded Program for Technical Assistance

Bart J. Bok[1]

Harvard College Observatory, Cambridge, Massachusetts

IN HIS INAUGURAL PRESIDENTIAL ADDRESS (January 20, 1949), President Truman called on the United States to embark upon "a bold new program for making the benefits of our scientific advance and industrial progress available for the improvement and growth of underdeveloped areas . . ." (his famous "Fourth Point" on foreign policy). The response to the President's challenge was almost universally favorable, and for three years our country has had an effective Point Four Program. The President's words made a deep impression on the members of the United Nations, which, by November 1949, had begun to offer its own parallel Expanded Program of Technical Assistance. This program was to be a joint effort of the UN and the specialized agencies; it has been effectively in operation since July 1950 and is closely coordinated with our American Point Four Program.

It is no exaggeration to say that the Expanded Technical Assistance Program has been the foremost service program undertaken by the UN, although the annual budget is only about $20 million as compared to more than $300 million for our Point Four Program. But, whereas in the American program the bulk of the funds is used for material technical assistance, the United Nations Program is basically one of education and of training of specialists, the emphasis being on the sharing of experience by the member-nations. In the UN program the assistance is provided especially through training centers, demonstration projects, and pilot plants within the underdeveloped countries, and to supplement this phase of the work UN activity leans heavily upon a fellowship program for study abroad. In most projects the cost of equipment is not to exceed 25 per cent of the total cost of a project.

The UN program is not primarily aimed at industrial development. Its stated purpose is "to strengthen the national economies of the member nations of the UN through the development of their industries and agriculture, with a view to promoting their economic and political independence in the spirit of the Charter of UN, and to ensure the attainment of higher levels of economic and social welfare of their entire populations." It is a program designed to build up the strength and prosperity of the member-nations. It is to be noted that agricultural and industrial development are considered on a par and that due attention is given to problems of a social nature related to economic development.

My own first contacts with the UN Expanded Program of Technical Assistance go back to the spring of 1949. At the Spring Mill meeting (June 3–4, 1949) the National Research Council's Committee on UNESCO analyzed the original plans from which the program was developed, and the resolution passed at the conclusion of the sessions seems fresh and sound, more than three years after it was written. We quote it here in full:

> *4. The Technical Assistance Program.* The N.R.C. Committee on UNESCO expresses a deep interest in the new Technical Assistance Program of the Economic and Social Council of the United Nations and gives its approval of the way in which UNESCO is collaborating in this important activity. The Committee urges that in the execution of the program the local population should be given important responsibilities and that careful attention be paid to the effect of the assistance upon the cultural, political, and social conditions of the population. It urges further that in the agricultural and industrial training program, full advantage be taken of experience gained through existing projects, and that in technical training programs emphasis be put on the development of small rural industries and on teaching by the apprentice method. Attention is drawn to the importance for wide areas of the world of the improvement of fishing methods and of the handling of the catch. The Committee recommends that, to supplement the local technical training programs, opportunities for further training at home and abroad should be provided for technicians who show marked ability. It is hoped that UNESCO will emphasize those phases of the program which involve participation or cooperation of several countries and that colonial and minority people may have a voice in the program through the Trusteeship Council of the United Nations.

The program seems to be operating very much along the lines of this resolution, and the NRC-UNESCO committee has not found it necessary to criticize the work or recommend changes. We have spent our committee time, instead, on a study of the difficult personnel problems that are created by the program. For "people" are the key to the success or failure of the Technical Assistance Program, and "people" of the expert variety are scarce, especially in a country like ours.

[1] The author wishes to acknowledge assistance in the preparation of this article received from Wallace W. Atwood, Jr., director of the Office of International Relations of the National Research Council, from Solomon V. Arnaldo, director of the New York Office of UNESCO, and from Helen Putnam, foreign affairs officer, the UNESCO Relations Staff in Washington, D. C.

The UN Program is administered by a Technical Assistance Board. A few months ago this Board issued its Fourth Report.[2] The Report—especially the first volume—should be read and pondered by every scientist interested in problems of world-wide technical assistance, for here we find not only a complete statement of the program and its achievements to date, but also a clear outline of the plans for the future.

The Technical Assistance Board is composed of representatives of the participating organizations: the UN, UNESCO, ILO, FAO, WHO, ICAO, the International Telecommunications Union, and the World Meteorological Organization. The International Bank and the International Monetary Fund have also had representatives at all meetings of the board. For several of the specialized agencies, the Technical Assistance Program represents an important area of activity. The initial period of operation was from July 1, 1950, to December 31, 1951, and for this period a sum of $20 million was made available by 55 member-governments. By April 15, 1952, 62 governments had pledged close to $19 million to finance the operation of the program in 1952 (a 12-month period as contrasted to the first period of 18 months), and for 1953 the total of all contributions is expected to reach $25 million.

The board cannot itself initiate projects and, as a matter of fact, can act only upon requests from recipient nations. By the end of 1951, 797 technical experts in a wide variety of fields had been sent out under the program to 75 underdeveloped countries and territories, all at the request of the governments directly concerned. In addition, 845 fellows drawn from 46 countries and territories had been placed in technical training institutions or had otherwise been provided with training, study, or observation facilities in countries other than their own. The accelerated pace of the program is shown in the figures for January 1 to the end of March 1952, when an additional 227 experts were recruited, and 232 additional fellowships were awarded, these figures being exclusive of regional activities such as special schools and seminars. The 797 technical experts were drawn from 61 different nationalities, thus illustrating that this program is one through which the member-nations are learning to help themselves by making use of each other's special skills. To illustrate the operation of the program, we shall describe in some detail certain specific projects, selected almost at random from the long list in the two volumes of the report.

Fish farming. Fish farming is a very old practice in Java. In the terraces on the volcanic hillsides the Javanese farmers plant fish and rice together. After they have built their mud dikes and have flushed their terraces with water, baby carp from the nursery ponds are turned loose in the underwater jungle of growing rice. After three months the terraces are drained for the ripening of the rice, and the fish are by then the size of large sardines. The technique is varied somewhat where one deals with brackish coastal waters, but the results are comparable: per acre of cultivated ground the yield of fish in weight is more than double that of rice. The fish help to supply the much-needed protein that supplements the rice, the staple food of the Javanese. The practice has the additional advantage of controlling malaria, since the fish feed on mosquito larvae.

The Haitian government asked for technical assistance in a program of fish culture "to induce an increase in the food resources, of which the country is in sore need." FAO sent an expert to survey the situation, and during 1951 the government set aside $10,000 to initiate fish culture. Seven experimental ponds were stocked with carp fingerlings from the United States and with local fish from Jamaica. A Haitian was given an FAO fellowship to study Indonesian methods, and additional assistants and field workers are now in training to promote fish culture among local farmers. Two FAO experts, a fish culture specialist, and a fish pond nursery expert, are assisting with the work.

A similar development is under way in Thailand, where inland fisheries were hardly developed at all. Whereas in Java the cultivator does not permit the carp to grow for more than three months, the Thai farmers are learning to their advantage that a carp grows to a length of 16 inches and a weight of two pounds within a year, and they have found so profitable a market for their carp that many are completely abandoning rice growing. To discourage the loss of rice, the Thai experts are trying to effect a compromise between the rice-and-fish cultivation and pond culture. FAO and the Technical Assistance Program have provided a number of fellowships to enable Thai experts to study methods abroad.

A project in fundamental education. During 1949—before the Technical Assistance Program had begun to operate—UNESCO sent a mission to Thailand to advise the government on educational development. There followed a request for "a Joint UNESCO–Thailand Commission of Experts to Plan, Organize and Operate the First Stage of a Ten-Year Plan of Educational Improvement."

The project has its headquarters at Cha-Choeng-Sao, a provincial capital (240,000 adults with 42,000 children) and a typical Thai community dependent upon rice growing, fruit farming, and small industry. A UNESCO fundamental education expert from New Zealand surveyed the possibilities in November 1950 and, jointly with Thai educators, formulated detailed plans for the project. Fairs with demonstration materials were organized, health and child-welfare centers were established, and every effort was made to acquaint the people with the plans for the comprehensive project, which deals with every aspect of the

[2] In two volumes, published by the UN Economic and Social Council as Documents E/2213, Vols. 1 and 2 (May 8, 1952). These volumes may be consulted at the UN Library in New York, at the Library of Congress, or at any library that is a depository of UN documents. The UN Press and Publications Bureau at the UN Department of Public Information is the agency to which requests for personal or institutional copies should be addressed.

country's education—adult, vocational, secondary, primary, health, physical, musical, arts and crafts, and social, as well as with teacher training.

The UNESCO team consists of a New Zealand expert in fundamental education, a primary school specialist from Denmark, British experts in language teaching and vocational training, and a science teacher from the United States, with Thai educators prominent in all phases of the work. Specialists from FAO, WHO, and ILO are joining the project, so that classroom instruction can be extended to the practical life of the people. From the pilot project a whole new system of education is developing in which "knowledge" is not just a matter of textbooks and recitation, but rather of hygiene, of agriculture, and of practical affairs of daily life. The emphasis is on "wanting to know" and "wanting to communicate" and so, one hopes, toward a literacy that will persist.

The project marks only the first step in the ten-year program. Teachers from all over Thailand are urged to visit the project and study what, for Thailand, are new methods. The reform of the teachers' colleges, the production of more and better teachers, the creation of new schools and adult education centers, the reform of the primary and secondary schools —all these are projects for joint planning and operation by the Thai government and the experts provided by the UN Technical Assistance Program.

Short-term assignments in industry. Yugoslavia is a country in which the "experts" exist already, but where there is need to bring them up to date on industrial developments in other parts of the world. At the request of the Yugoslav government, the UN is running an experiment in short-term assignments of highly qualified specialists. We list here some of the assignments made under the UN "Briefing Service."

1) Two U. S. experts visited Yugoslavia for one month to advise on methods of base metal mining, the use of new drilling methods, the mechanization of ore loading and transport operation, and the rationalization of mining methods, making the most economical use of equipment already installed.

2) Two cement experts, one from France and one from Switzerland, advised for a period of one month on problems affecting the cement industry.

3) Three French experts in hydroelectric power production and transmission, and on gas works operation, were sent as advisers for three weeks each.

4) A U. S. expert in the rehabilitation of the physically handicapped was sent for seven weeks.

Directly related to the program for top-level advisers is a parallel program initiated by ILO, whereby workers from Yugoslav factories are to obtain practical, on-the-job training in industrial establishments abroad. Besides sending 44 foremen-instructors to Yugoslavia from abroad, ILO is planning to place 377 Yugoslav workers in factories abroad for average stays of six to twelve months. The skills that are being perfected range from electronics to foundry practice, from aeronautics to railway engineering, from precision instruments to trucks.

Other sample projects. The two volumes of the report should be read if one wishes to understand the full scope of the UN Technical Assistance Program. We can refer here only to a few other projects.

In India a malaria-infested jungle area of 2000 square miles is being opened up for cultivation and food production. In 1947 the Indian government made the area available for settlement by ex-servicemen and by Hindu immigrants from Pakistan, but malaria almost stopped the plan. In 1949 WHO sent in a team consisting of a Greek malariologist and an English public health nurse, with supplies and equipment provided by the UN Children's Emergency Fund. The Indian government sent another team composed of a malariologist, an entomologist, and a woman health-visitor, and provided necessary assistants and laborers. Spraying of DDT on a large scale was instituted, together with other public health services, and malaria has almost disappeared. The settlement scheme can now progress rapidly. FAO joined in the project with WHO and sent a team composed of experts from Britain, the United States, Holland, and Denmark to assist the Indian team. The aim is not only to open up the new food area, but also to provide for a proper balance between cultivation and forestation. The establishment of training and demonstration centers is an important part of the project, and well-planned rural industries are being encouraged.

Brazil is setting aside funds for one hundred fellowships for technicians from other Latin-American countries to study at the National Service of Industrial Apprenticeships in São Paulo. ILO, which administers this training program, is in turn providing assistance to strengthen the São Paulo Institute and to extend its services.

Other projects include assistance to the government of El Salvador in establishing a Rural Demonstration Area, a project in which WHO and the UN Children's Emergency Fund are being joined by UNESCO, FAO, and ILO, and in which bilateral assistance from the United States plays an important role.

In Asia, where 70 per cent of the people depend upon rice as their staple diet, assistance is being given to the Cuttack Rice Research Station (with the Indian government as host and FAO as the sponsor, and in buildings provided through funds from the Colombo Plan); ten countries—India, Pakistan, Burma, Ceylon, Indonesia, Indo-China, Thailand, Malaya, the Philippines, and Japan—are combining their efforts in a comprehensive project of hybridization and selection of varieties of rice. Pakistan has requested assistance for a varied program of scientific development, with special emphasis on geodesy, terrestrial magnetism, seismology, and atmospheric physics. The new independent nation of Libya is the subject of an extensive project that has, as one of its parts, a clerical and technical training center begun by UNESCO in Tripoli in 1950. There are now technical assistance projects of wide scope in Afghanistan, in Bolivia, and in Indonesia. The program can indeed be said to be a

world-wide service program from the UN to its member-nations.

The UN Expanded Technical Assistance Program operates largely through missions of experts, and the success or failure of a particular mission depends on the qualifications of the team selected to execute it. The report declares: "The search for highly qualified specialists with sympathetic attitudes to the work will never be easy: and to send an expert who is not fully and specifically qualified for his assignment is usually worse than to send no expert at all."

Technical skill and competence alone are often not sufficient to make a good expert. The man or woman who sets out on a technical assistance mission must also have an appreciation of the culture in which he is to work. Some knowledge of the language of the country is almost always essential, unless the mission is a highly technical one or at an advanced university level. The expert may expect to encounter difficulties and obstacles for which he deserves none of the blame, and an expert who is easily discouraged had better not set out on a mission. It is highly desirable that the expert be a believer in the cause of international cooperation for improving economic and social conditions. For a while he may find it helpful to identify himself with the country in which he is working, but in the end he must be prepared to withdraw gracefully, and he should look forward to having his work carried on by the nationals of the country.

The selection of U. S. experts, who are much in demand, is an especially difficult problem. For one thing, we lack in our country the proper machinery for finding the experts. And, when an expert is once located, the chances are considerable that he may find it difficult or even impossible to leave his present job and go for a year to a far corner of the world. The most desirable experts from the technical point of view are not infrequently quite ignorant when it comes to a knowledge of social, cultural, and political conditions in other parts of the world. They may require extensive briefing, and this requires not only time and extra funds, but also additional qualified personnel. Finally, the missions are mostly for periods of one or two years, and the expert cannot always be assured of prompt re-employment upon his return home. How are we to contribute our share of the world's experts in the Technical Assistance Program, and how are we to ensure that their good work for the cause of international cooperation will not hamper their careers at home? The NRC Committee on UNESCO has studied these questions and has formulated certain specific recommendations for the selection of personnel.

A distinction is made between "career personnel" and "short-term experts." Because of the variety of assignments to be filled, career personnel must be found who will be able to take various positions in succession within their fields. Consideration should be given to the establishment of special training centers, and some form of tenure must be provided (through "carry-over" appropriations, or otherwise) to afford financial security for much longer periods of service than have been customary up to now.

The NRC committee notes that the most desirable "short-term experts" are usually scientists of considerable repute within their fields, who are not always able to be away for extended periods. A special effort should be made to use their services for short periods in the field. Adequate briefing is essential, and the assignment of the expert should be clearly defined well in advance of departure on the mission. In the recipient country, short-term experts should be placed within the framework of an established organization, in preference to using them as independent consultants.

The NRC Committee on UNESCO deems it desirable for all major professional societies to set up special working committees to assist in finding the right person for each assignment. It is noted that such committees already exist in the engineering profession; the Engineers Joint Council has two committees concerned with work in this area—the Committee on International Relations and the special Committee on Technical Assistance. Several other professional societies have international relations committees, but, so far as I am aware, these have not been active in the recruitment of personnel for overseas service. The National Research Council, which maintains close contacts with the UNESCO Relations Staff in the Department of State and with the representatives of WHO, FAO, and the other UN specialized agencies, seems the ideal organization to coordinate the activities of these special committees of the professional societies. These committees should be in close contact with the official recruiting agencies such as the Technical Assistance Recruitment Office, Bureau of Personnel, United Nations, New York, and the corresponding offices of the specialized agencies, such as the New York Office of UNESCO, United Nations, New York. Interested individuals should also address their personal inquiries to these offices.

The NRC Committee on UNESCO has made the suggestion that openings be advertised publicly in professional and technical journals. It would be helpful if available opportunities could be listed from time to time in SCIENCE, THE SCIENTIFIC MONTHLY, *Journal of the American Chemical Society,* and the publications of other professional societies.

In the end, the success or failure of the recruitment phase of the work will depend again on what we as individual American scientists are willing to do to support the UN Technical Assistance Program. If we believe in the basic worth of the program, then we should do all we can to assist by helping to secure the services of the best man or woman for each job. And if the finger should point to one of us, we should not lightly refuse.