

# PROGRAM AND BUDGET FOR THE COMING YEAR

The program of work for 1962, submitted by the IAEA Board of Governors to the fifth session of the Agency's General Conference, envisages some expansion of scientific activities, while maintaining a major emphasis on the provision of technical assistance in the form of training facilities, services of experts and supply of equipment. The Board has pointed out that the Agency's initial activities to help start or develop nuclear energy programs in various Member States are beginning to bear fruit and as a consequence new needs are emerging.

It is stated that as the results of the Agency's training programs and early technical assistance projects become evident, it should be possible to determine which fields would be most suitable for concentrated action at the international level. For example, it is now clear that it would be desirable to supplement the program of fellowships by creating training opportunities in the less developed regions themselves. Again, the stage will soon be reached when special attention will have to be given to helping Member States to make effective use of the scientists and technicians trained under the Agency's auspices. Greater efforts will be required to supply experts and equipment for starting nuclear projects on which the scientists are to be employed, and new laboratories should be assisted through the award of research contracts.

The Board feels that while it is important to continue the dissemination of information by means of scientific meetings, the number of the meetings will have to be kept within reasonable limits so as to permit careful and adequate preparation for each meeting. About documentation, the Board has emphasized the Agency's unique position as the central recipient of non-classified information from its Member States and its ability to assemble and disseminate the latest results of nuclear research and development as well as to prepare special studies and surveys on selected topics. "This stimulates further research and at the same time helps to avoid wasteful duplication of effort in national research institutions."

Another major program of the Agency relates to radiation protection and it is pointed out that the recommendations formulated by the Agency on the transport of radioactive materials, on waste disposal and on safety measures for laboratories and research reactors have proved useful even to the more advanced Member States. These activities, the Board feels, must be continued and should be followed up in most cases by the incorporation of the recommendations into new administrative and organizational rules and regulations or into existing international conventions, and in special cases by the framing of new conventions.

The Board has also stated that as the scientific staff of the Agency gains experience it can render an increasing number of services to Member States. Scientific services can also be provided by the Agency's laboratory, for which 1962 will be the first full operational year.

Some of the more important provisions of the Agency's program for 1962 are summarized below.

## Nuclear Power and Reactors

Studies on the economics and technology of nuclear power will be continued. To widen the scope of the current work on the methodology of nuclear power costing, it is planned to undertake a costing analysis within the framework of a developing power network. It is also expected that there will be a demand for two missions to survey nuclear power prospects in particular areas. Data on the world's uranium reserves and production capacity will be assembled and estimates made of uranium requirements over the next ten to fifteen years. Since methods of waste disposal may have an important bearing on the fuel cycle cost, it is proposed to make a study of the economics of various techniques of handling radioactive wastes.

Quite a few meetings relating to reactor science and technology are planned for next year. The "Directory of Nuclear Reactors" will be kept up to date. Work will also continue on reactor physics data, especially in the context of the program of research undertaken jointly with Norway with the Norwegian reactor NORA.

The Agency will continue to play a co-ordinating role in the assembling and exchange of information relating to reactor research and power production. The publication of an inventory of research projects relating to the disposal of radioactive wastes will begin in 1962.

## Radioisotopes

To a large extent the provision of experts and equipment by the Agency is for developing the uses of radioisotopes. Many of the fellowships and research grants awarded each year are for specialization in such uses. The demand for training courses for this purpose is also heavy and an increasing number of research contracts are being granted for the investigation of techniques that promise new uses for isotopes. This general trend will certainly continue in 1962 and beyond. For instance, requests for several specific regional training courses in isotope applications were received in 1961, not all of which

could be accommodated, and "the demand for 1962 seems larger even at this stage".

In awarding research contracts for studies on radioisotope applications, special attention is given to the needs and interests of the less developed countries, and it is planned to increase substantially the awards which can be of direct value to many Members. Only about ten per cent of the research contracts are now awarded for research on radioisotope applications; it is planned to increase this to approximately thirty per cent.

A study of the economics of radioisotopes (production, distribution, import and export), which was begun in 1960, will be followed by one on the economic impact of isotope utilization; the estimates made in some of the countries that are advanced in nuclear technology are very encouraging, but no agreed methodology or complete studies seem to be available.

Several guides and handbooks on the uses of radioisotopes and the techniques employed are planned for 1962.

Measuring the uptake of radioiodine by the thyroid is a diagnostic procedure now used in many countries. A group of consultants has agreed upon simple standard methods of measurement as well as on the technical details of an international calibration project. The project, starting in Europe in 1961, will be extended to other regions in 1962.

A study has been started on the scientific and economic possibilities of large-scale control of insects by radiation; the work, which will be particularly valuable for agricultural countries, will be developed further in 1962.

The project under which a world-wide survey of the concentration of hydrogen and oxygen isotopes in natural water is being made with the help of tritium should be sufficiently advanced in 1962 to permit an expert evaluation of the results.

Several scientific meetings planned for the coming year will deal with isotope applications.

## Services, Equipment and Supplies

By the end of this year, about 40 countries will have been visited by the Agency's preliminary assistance missions and it is expected that only one such mission, which will visit some countries in Africa, will be needed in 1962. Two follow-up missions have been planned.

Requests for the services of experts have been increasing, but although the requirements for 1962 may be larger than this year, only a slight increase in the number of experts provided by the Agency has been planned for 1962, in view of the inadequacy of resources available for this purpose.

Limited funds will also tend to prevent a rapid increase in the supply of equipment. It is planned to publish some studies and handbooks on new developments in instrumentation and equipment.



Members of the Agency's Scientific Advisory Committee. Front row, left to right: Professor I.I. Rabi (USA), Dr. H.J. Bhabha (India), Dr. W.B. Lewis (Canada) and Professor V.S. Emelyanov (USSR); back row, l. to r.: Mr. Sterling Cole, Director General, IAEA, Dr. Luiz Cintra do Prado (Brazil), Dr. B. Goldschmidt (France), Sir William Penney (UK) and Dr. Henry Seligman, Deputy Director General (Research and Isotopes), IAEA

Although the Agency has so far supplied nuclear materials on a very much smaller scale than was envisaged five years ago, some transactions have been completed and others are being informally discussed.

## Scientific Information

According to a tentative program, 11 scientific meetings are planned for next year. Among these will be a conference on the corrosion of reactor materials; the other meetings are likely to be smaller in size. In addition, the Agency is expected to co-sponsor a number of meetings on subjects which are of direct interest to its own programs of work.

The program of scientific publications in 1962 will be only slightly larger than that for this year. No marked change in the types of publications is contemplated. So far as documentation is concerned, liaison will be maintained with documentation centers in Member States and specialized international organizations. Assistance will be given to the less developed Member States in the establishment of national and regional information centers and in the improvement of their scientific documentation services.

## Exchange and Training

On the basis of resources expected to be available, not more than 360 fellowships can be awarded in 1961, but some increase is expected next year. It is hoped that it will be possible to make fuller use next year of the training facilities offered by some Member States.

The number of visiting professors sent by the Agency is also expected to increase. The Agency

received requests for eight regional or national training courses in 1961 and the requests for the coming year are already larger. The possibility of setting up regional training centers is also being examined.

Use will continue to be made of the Agency's two mobile laboratories for training in isotope techniques.

## **Safety and Safeguards**

Basic safety standards developed by the Agency will call for continuous review. More manuals on specific aspects of radiation protection are also expected to be prepared. There may be some expansion of activities concerning the evaluation of reactor hazards.

It is planned to assist Member States in establishing film badge and other services for radiation safety. Research contracts will be awarded on further topics relating to health physics and radiobiology. The short- and long-term effects of radioactive waste disposal will also be investigated under this program. Furthermore, studies will be made on preventive measures against radioactive contamination as well as on methods of decontamination.

Some of the meetings held or co-sponsored by the Agency will deal with problems of radiation protection.

A start will be made with the collection of all information on nuclear accidents, as well as with a survey of radiation doses received by persons involved in such accidents.

It is likely that modifications and additions will be necessary to the principles and procedures for the application of safeguards. A general review will therefore be carried out in 1962. It is also planned to study provisions for certain types of nuclear

facilities which are not covered by the present safeguards system.

## **Budget**

For carrying out the work planned for next year as well as for meeting the normal administrative expenses, the Board of Governors has prepared a total budget of US \$8 316 000.

As usual, the budget is divided into two parts: Regular and Operational, the former to be financed from the assessed contributions of Member States and the latter out of the Agency's General Fund which is made up of voluntary contributions.

The proposed Regular Budget for next year provides for an expenditure of \$6 261 000, as against an approved Regular Budget of \$6 168 000 for the current year. Some of the important allocations are: \$885 500 for scientific and technical services and laboratory charges, \$260 000 for the distribution of scientific and technical information, and \$180 000 for the holding of seminars, symposia and conferences. The administrative expenses of the Agency are also included in the Regular Budget; the proportion of these expenses in the Regular Budget as a whole has considerably declined since the early days of the Agency when a major portion of resources had necessarily to be spent on the establishment of the Agency's organizational and administrative framework. The proportion of resources devoted to functional activities has correspondingly increased.

The Operational Budget is set at \$2 055 000 for the coming year, as against \$1 800 000 for this year. An amount of \$827 000 is provided for fellowships and training, and \$758 000 for technical assistance. A provision of \$168 000 has been made for the award of research contracts, while \$40 000 are proposed to be spent on the operation of the two mobile radioisotope laboratories. The remainder of the proposed expenditure under the Operational Budget is meant for the Agency's laboratory.