

IAEA LOOKS AHEAD

HIGHLIGHTS OF 1960 PROGRAMME

IAEA's programme of work for 1960, presented to the General Conference for final approval, shows that the coming year will be in many respects a period of consolidation during which the activities that have been initiated or planned so far will acquire a solid and stable base. Consolidation, however, will not mean routine duplication or a halt to the continuous development of work. In fact, the very process of consolidation will involve considerably increased activity in certain directions, particularly in the field of technical assistance, and a general strengthening of effort in others. All the varied activities of the Agency form part of an integrated design, so that one phase must follow another in a sequence of organic growth.

Sequence of Development

This sequence can be illustrated by the Agency's programme of technical assistance. Since most countries are still in the early stages of atomic energy development, the Agency thought it desirable to make an initial assessment of their requirements so that assistance could be given where it was most needed and where it could be best utilized. Accordingly, preliminary missions have been sent out to make broad surveys and hold consultations in South-East Asia, the Far East and South America. For many of these countries the stage has now arrived for the actual provision of assistance to specific projects which, in many cases, have emerged out of the preliminary surveys and consultations. Similar surveys, on the other hand, are yet to be made in several other regions, and the programme for 1960 envisages the despatch of four preliminary missions. Two of them are expected to go to the Middle East and Africa, one to Central America and one to some countries in South America, which have not been covered by this year's mission to that region. Besides, a few short exploratory missions may be organized in connexion with specific technical assistance requests.

The training and fellowship programme of the Agency will gather further momentum in 1960. Most of the fellows under the 1959 programme will begin their studies next year, and under next year's programme the Agency expects to award a considerably larger number of fellowships than were awarded this year. Besides, the programme for an exchange of scientists and professors should be effectively under way by 1960. The Agency has also planned specialized training courses and a South-East Asian symposium on education and training in nuclear science and technology.

The Agency expects that its importance as a supplier of nuclear materials and equipment will increase during next year and that several agreements involving

the supply of fissionable and source materials will be concluded and implemented. The precise extent and nature of these activities will, of course, depend on the requests for supplies that the Agency may receive. In the field of materials, it is expected that the Agency will also be called upon to provide expert advice in regard to prospecting, mining and ore processing. Work is also expected to arise in 1960 in connexion with the verification and analysis of materials to be delivered to or by the Agency.

As regards equipment, work on the cataloguing and classification of nuclear instruments will increase in 1960. A handbook explaining the advantages of different types of instrumentation for various nuclear applications will be prepared during the year.

In the field of nuclear power, the Agency will continue its technical and economic studies on the utilization of atomic power in the less developed countries. Since this would depend largely on the development of suitable small and medium power reactors, a considerable volume of work will be concerned with an assessment of various reactor systems of small and medium power output. The Agency will also study the progress in the design, construction and operation of reactors for ship propulsion, and a scientific meeting on the subject will be organized. Provision has also been made for a few power survey missions.

Lines of Research

A field in which the Agency's activities will substantially increase next year is that of scientific research. The Agency's functional laboratory at Seibersdorf is expected to be in operation in the last quarter of 1960. The Agency will then undertake varied scientific analyses, testing and measurements that are needed in connexion with its other substantive activities. Much of this work will be concerned with the establishment of international standards for radioactive substances and radiation measurements, special materials for nuclear technology and in connexion with the Agency's safeguards and health and safety programme. In addition, the laboratory will make it possible for the Agency's scientific staff to carry out special analyses and measurements on behalf of Member States.

Disposal of radioactive wastes, which has been a subject of widespread concern, has engaged the Agency's attention from the beginning. Research concerning the disposal and utilization of wastes will continue.

A feature of the Agency's research activities is the award of contracts to scientific institutions in different countries for studies and investigations into

specific problems. Under the regular budget, contracts are given for research in connexion with health and safety measures and safeguards. There will be other research contracts to be financed from the operational budget. The Agency's scientific staff will supplement the research contract programme by carrying out studies on subjects directly related to the programme and by collecting and evaluating available data and serving as a clearing point for laboratories which have been awarded contracts. This will be the first step towards an international co-ordination of research in the field of atomic energy.

Closely related to the Agency's research activities is its programme to promote the production and use of radioisotopes. Its advice will be available to Member States on the scientific, technical and economic aspects of the production of isotopes and their applications in medicine, agriculture and industry. Missions of isotope experts will be organized. It is also expected that a sufficient number of requests will be received for the two mobile isotope training laboratories of the Agency to make their full utilization possible. Scientific meetings dealing with isotopes will be another valuable means of a diffusion of knowledge and experience of isotope research and application.

All aspects of collection and dissemination of scientific information will be considerably strengthened next year. A number of scientific meetings have been planned for 1960; these include a conference on medium and small power reactors, a conference on radioisotopes in the physical sciences and industry, and smaller meetings on such subjects as the use of isotopes in the study of endemic and tropical diseases, basic nuclear physics, and fusion results. Another important feature of the programme will be the publication of a bulletin of scientific and technical information. In addition, there are plans for a journal devoted exclusively to information on research in thermonuclear fusion.

International Regulations

As already pointed out, many of the Agency's own research activities are concerned with the establishment of international standards and regulations to govern operations involving radiation and radioactive materials. The importance of these regulatory functions has been widely recognized and will grow further with the rapid development of atomic energy programmes in different parts of the world. Although the Agency regulations can be binding only with respect to its own operations or projects carried out under its aegis, their actual impact is much wider.

A manual on the safe handling of radioisotopes has already been issued, and a survey of comments and operational experience that may be available by 1960 will be useful in considering whether any part of the manual needs revision. In any case, the practice of supplementing the manual by specialized addenda will be continued. It is believed that the issue of an additional manual dealing with accidents and emergencies arising from the use of radioisotopes should be possible in 1960.

Experience in the application of Agency-sponsored recommendations for the safe transport of radioisotopes and of irradiated fuel will be assembled and evaluated, and a panel of experts will be set up to recommend standards for the disposal of radioisotopes in international waters. Studies will also be made on the possibility of setting standards for the safe operation of reactors.

The assembly, study and correlation of national or regional recommendations and regulations will be a continuing task. It is expected that the Agency will be called upon to undertake heavier responsibilities in this field of harmonization and co-ordination in the coming year. Besides, it will have to provide technical advice on health and safety matters in connexion with many projects in Member States.

Reference has been made to the Agency's studies on the problem of radioactive waste disposal. A panel which has been examining the problem of disposal into the sea has completed its initial work, which will be followed up by further specific studies next year. The need will arise for the Agency to set up and maintain an international register of sea disposals.

The regulatory activities of the Agency also extend to the establishment of safeguards procedures; the procedures developed during 1959 will be improved next year on the basis of operating experience. Besides, the Agency will probably be required during 1960 to undertake safeguards inspection of materials supplied under Agency projects and possibly under bilateral agreements. The Agency may also have to provide technical assistance to Member States in establishing or improving their internal safeguards procedures.

In many fields of activity, the Agency is working in close co-operation with the United Nations and its specialized agencies, as well as with other organizations active in these fields. This co-operation will continue and be further strengthened in the coming year.