In accordance with its Statute, provision is made for the Agency " to encourage and assist research on, and the peaceful development of, atomic energy for peaceful uses throughout the world".

The Research Contract Programme

Provision for the direct support of research carried out at appropriate institutes in Member States was made early in the Agency's history. The first efforts were directed towards research of a more fundamental nature in a few limited subjects. During recent years, however, the programme has achieved a somewhat more stable form concerning problem-oriented research in the fields of nuclear science and technology, radioisotope and radiation applications, and the protection of man and his environment.

The development of the programme into its present form, which has taken place over a period of nearly a decade-and-a-half, has been based on two major principles: that the nature of the research supported shall be essentially applied (as opposed to more fundamental studies); and that the programme shall be oriented to the maximum extent possible towards the particular requirements of developing countries. To this has been added the tenet that when considering individual awards, all other factors being equal, preference is always given to a proposal from a laboratory located in a developing country. The result of this has been not only that the greater portion of the programme is oriented towards projects of high specific relevance to the developing countries, but that some three-fourths of the funds available each year are awarded to institutes in these countries. The extent of participation of the developing countries in the programme during 1973, which has been particularly high, is shown in **Figure 1.**

The individual sums awarded are seldom large, in keeping with the modest overall budget of some $1,000,000 for the support of research in all subjects, and the average award per contract per year is somewhat less than $4,000.

Though the limited funds available pose a problem in respect of allocation, the cumulative effect is nevertheless substantial, and a total of some 11 million dollars has been awarded from the Agency's own budget for contractual research since the beginning of the programme. In addition to these funds, generous contributions towards the research contract programme have also been received at various times from the United States Atomic Energy Commission, the Federal Republic of Germany, and the Swedish International Development Association.

In an effort to increase the impact of the programme, an unusual type of award has been developed called a "Research Agreement", which does not make provision for financial remuneration, but does permit the institute entering into such an agreement to take part in one of the Agency's co-ordinated programmes of research in which a number of other institutes in different countries are also participating.

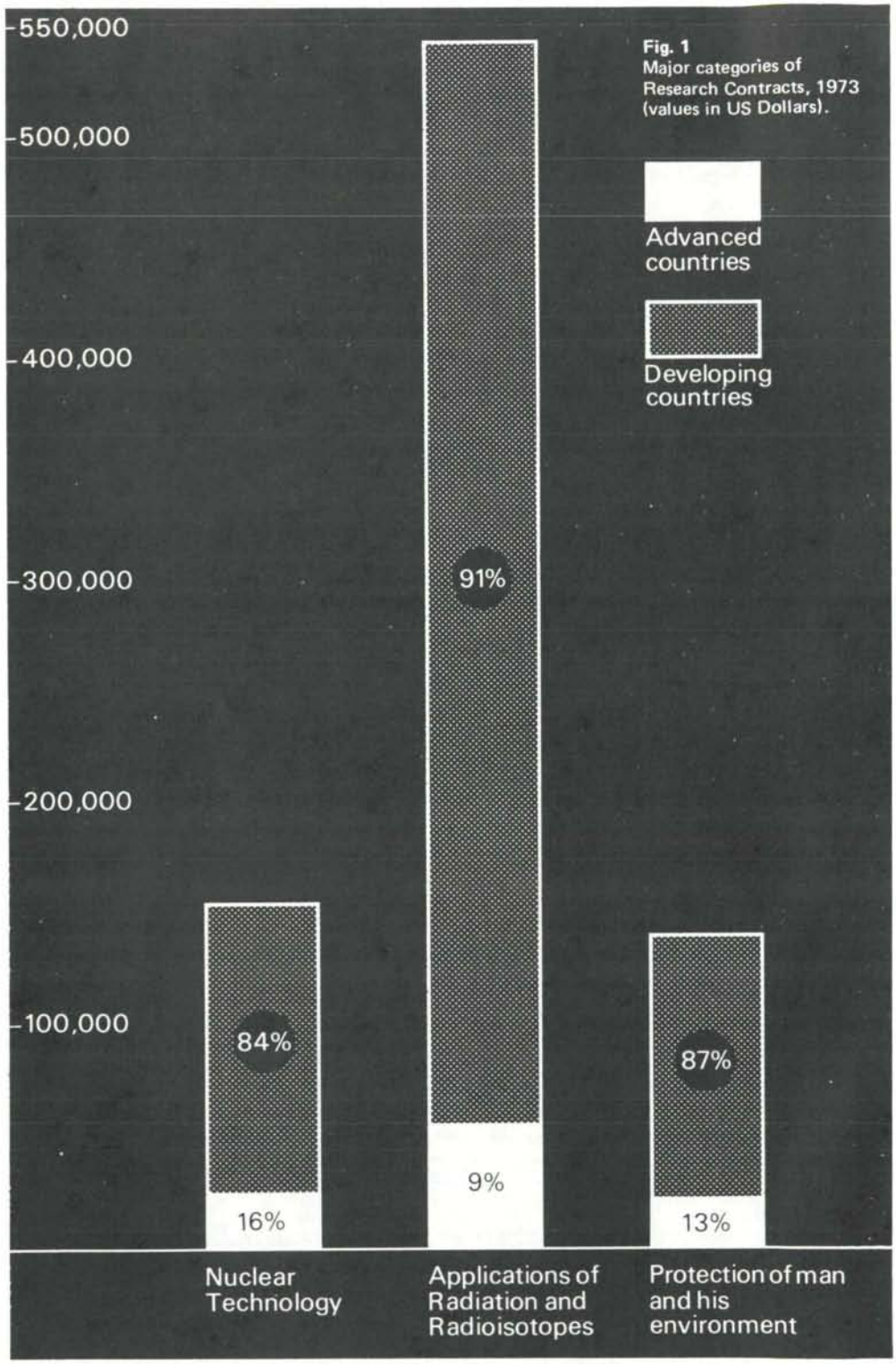


Fig. 1
Major categories of Research Contracts, 1973 (values in US Dollars).

Because of the international character of the Agency, it is in a unique position to serve as a central co-ordinating point for scientific research in certain limited and well-defined fields of research. In recognition of this fact, and in an effort to increase the impact of its research expenditures, the Agency has in recent years given considerable attention to the development of small, modestly-funded, but important co-ordinated programmes of research in which a number of institutes in various countries co-operate in undertaking research in relation to a well-defined theme. These programmes usually cover a five-year period, and meetings between the participants are held at appropriate intervals – normally every one or two years. **This type of arrangement is employed in relation to research in each of the fields in which research is sponsored by the Agency, though a number of individual projects are still supported, and it is hard to over-estimate the value of the direct personal contact made possible.** Such contact, whether it be between scientists in various developing countries who are thus made aware of their colleagues' handling of similar problems, or between a laboratory in a developing country and one in an advanced country, has proven to be one of the most powerful factors in stimulating research efforts. The role of the Agency as co-ordinator and catalyst is thus enhanced as it cuts through existing political, geographic and language barriers.

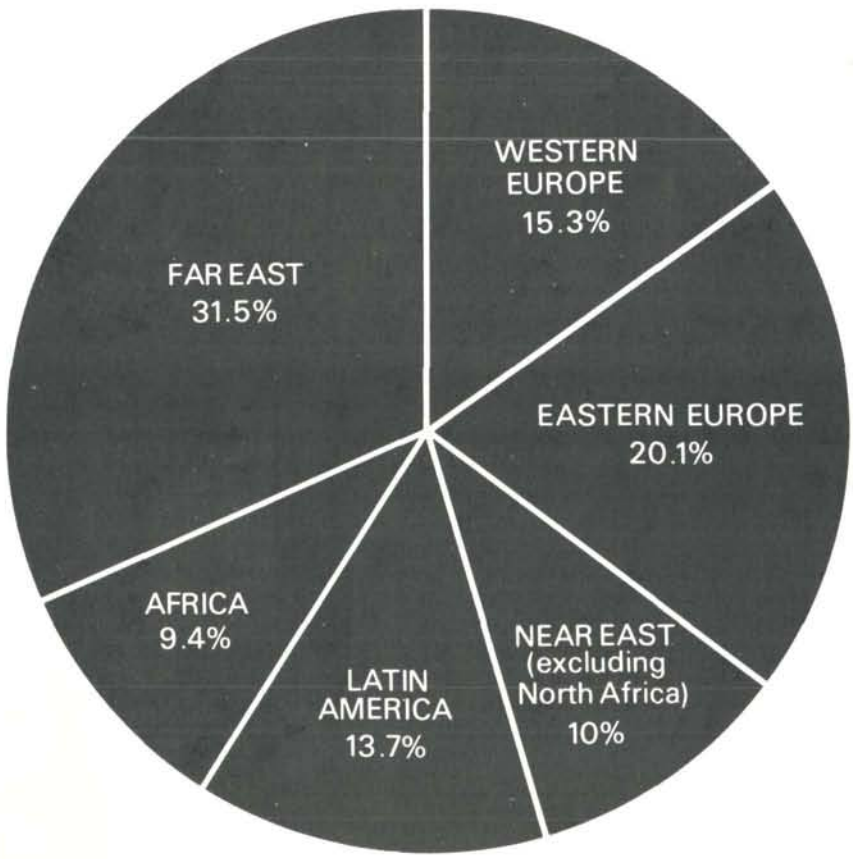


Fig. 2 Geographical distribution of Research Contract Funds to institutes in developing countries, 1973.

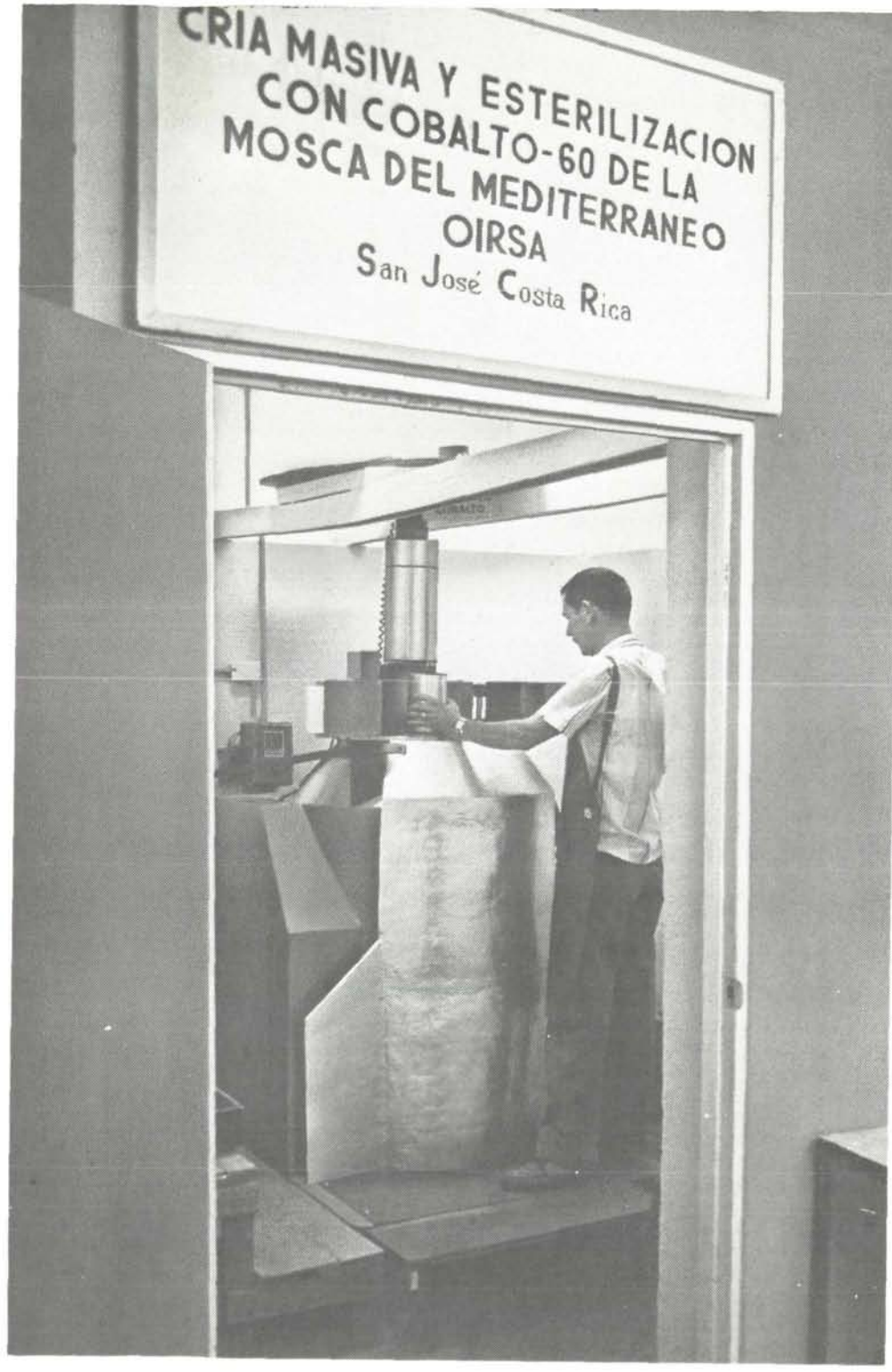
There are other reasons why the programme has proven of value to research institutes in the developing countries. Because it offers young scientists the possibility to undertake meaningful research in their own home countries under the aegis of Agency sponsorship over a minimum period of two or three years (the normal period for contracts not associated with a co-ordinated programme is three years), the programme has been of help in reducing the so-called "brain drain". Agency sponsorship means also that the institute itself is bound to support the project because each contract is awarded on a cost-sharing basis. It should not go unnoticed that, while such contracts may present a form of aid to the country concerned, such assistance is provided in a manner consistent with the research goals of the institute. A strict assessment can be made as to the use to which the Agency's contribution has been put, as periodic technical reports must be prepared as well as a comprehensive scientific report at the end of the project. Finally, because the Agency is prepared to arrange procurement of equipment and expendable supplies for the project on behalf of the institute in cases where this would prove beneficial (up to the value of the award), an important avenue to obtain such items is open to the scientists concerned in a number of countries where import or exchange restrictions normally make such procurement both difficult and very time-consuming.

Through the years the subjects of research on which scientists from developing countries have been working have continually expanded, until at the present time every subject is represented in which research is sponsored by the Agency. While the participation of the developing countries in nuclear research began largely with the application of isotopes in medicine and agriculture, far more sophisticated research is now being carried out in relation to such subjects as reactor instrumentation and control and the effects of ionizing radiation on both biological and inert material.

Of the more than 60 countries represented in the research contract programme at the present time, more than 40 are classified as developing countries in accordance with accepted United Nations terminology. **Figure 2** indicates the geographic distribution of research contract funds during 1973.

Just as the research contract programme has become an integral part of the Agency's activities in support of the development of nuclear science and technology, so has the participation of the developing countries in this programme become firmly anchored as a result of their own efforts to absorb and employ the most modern techniques in a wide range of research activities.

Central America is seriously threatened by the Mediterranean fruit fly, which has the potential of inflicting $ 82 million damage there annually. The UNDP, in an eradication programme carried out by ▶ the IAEA, is trying to combat the pest in the region. Here a container of 60,000 pupae is irradiated with Cobalt-60 in the fruit fly laboratory at San Jose, Costa Rica . . . Photo UN.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