

REGIONAL ORGANIZATION OF RESEARCH IN AUSTRALIA AND SOUTH-EAST ASIA

THE concept of the development of scientific research on a regional basis is one which has long been advocated by Unesco, and followed in the operations of its field science co-operation offices. The South-east Asia Science Co-operation Office has been active in stimulating collaboration and co-operation in a number of scientific fields in its region, and has been responsible for two important meetings—in Bandung in 1959 and in Hong Kong in 1961. Representatives of national research councils in the area met to discuss general problems of organizing scientific research (see *Nature*, 186, 859, 1960; 194, 626, 1962). More recently, in February 1964, a third meeting was held in Canberra, Australia, for a similar purpose, the local arrangements being made by the Australian Commonwealth Scientific and Industrial Research Organization.

The Canberra meeting enlarged the scope of the earlier meetings, as it included representatives of national research organizations from both South and South-east Asia. Delegates came from Ceylon, China (Taiwan), Hong Kong, Indonesia, India, Israel, Japan, Korea, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Thailand, Viet Nam and Australia. There were also present consultants from India, Indonesia, Japan, the United States, the U.S.S.R. and Australia, and observers from the World Health Organization, the Food and Agriculture Organization, the Pacific Science Association, the Pan-Indian Ocean Science Association and the South Pacific Commission.

Following the United Nations conference on the "Application of Science and Technology for the Benefit of the Less Developed Areas" (*Nature*, 197, 1135; 1963) in Geneva in 1963, Unesco made plans to extend considerably its activities in the field of natural science, and the Canberra meeting was looked on as a regional follow-up to the Geneva conference. It was considerably strengthened by the presence of M. Rene Maheu, the director-general of Unesco, for part of the proceedings and a delegation from Unesco headquarters including Prof. V. Kovda, the director of the Natural Sciences Department. Sir Frederick White, chairman of C.S.I.R.O., was elected chairman of the meeting. Prof. Sarwono Prawirohardjo, president of the Indonesian Council of Sciences, was elected rapporteur.

The meeting, which was held in the Australian Academy of Science building, was opened with an address from Senator the Honourable J. G. Gorton, the Australian minister assisting the Prime Minister in education and research. Mr. Gorton referred to the fact that many developing areas could benefit significantly by the application of scientific facts which were already known, so that it

was essential for Governments to provide adequate extension services and ensure the supply of trained technicians.

M. Rene Maheu also addressed the meeting and emphasized what he described as the salient features of the Geneva conference: that countries can scarcely hope to obtain economic independence—and political independence without economic independence is little more than a façade—if their own scientific and technical potential remains below a minimum threshold. A far-sighted governmental policy for science will seek two main objectives: to develop scientific and technical potential on one hand, and, on the other, to apply the creative and assimilative capacities of that potential to the cultural, economic and social progress of the country. The purpose of the Canberra meeting was to define fields of application, and methods of formulating and executing such national scientific policies.

The principal sessions of the meeting covered national science policies, relations between science and Government, research and economic development, investment in research, research organization and administration, and regional collaboration in research and training.

Underlying all the discussions was the question raised by M. Maheu: how best to ensure that science plays its most effective part in the processes of economic development. This involves the setting-up of suitable advisory machinery for government. It will vary according to the stage of the political, economic and scientific development of the country concerned, but must bring the possibilities of science to the notice of the economic planners, and also ensure feed-back of economic problems to research groups. Proper organization and management are essential if science is to flourish and to make an effective contribution to development. At the same time it is necessary to plan educational and manpower development and to ensure the availability of trained men, not only to engage in investigation and research, but also to ensure that research results are put to agricultural and industrial use.

As was to be expected, discussion was largely directed towards the role and activities of Unesco in the regions represented at the meeting. It was clear that there was general appreciation of the work which Unesco has been doing in the various countries concerned, though there was by no means an uncritical acceptance of all its policies. The principal help needed from Unesco was towards building up within each country an organization which would enable it to develop internal solutions to its own problems.

G. B. GRESFORD

ASPECTS OF SOIL SCIENCE

THE eighth International Congress of Soil Science was held in Bucharest during August 31–September 9. The official opening of the Congress was held in the Great Hall of the Palace of the Romanian Peoples Republic by President Gheorghe Gheorghiu-Dej. In his speech welcoming the 1,200 delegates, the Romanian President stressed the need for raising the standards of food production in the world. He complimented the International Soil Science Society for its contribution to this vital work, and for the part it played in the development of understanding and peace.

After the necessary business of the Society had been concluded, the programme of scientific papers began with a general session in which the history and progress of the Food and Agriculture Organization/Unesco project for a

World Soil Map were described. Good progress had been made, and hence it was possible for several maps to be exhibited at the Congress. Throughout the nine remaining days of the meeting, more than 700 papers were read to the seven Commissions of the Congress, dealing with soil physics, soil chemistry, soil biology, soil fertility, soil genesis, classification and cartography, soil technology, and soil mineralogy. Abstracts of the papers were made available in English, French and German, and the proceedings of the Congress will be published in the near future.

The papers read in Commission I (Soil Physics) dealt with such diverse topics as the physical relationships between the solid and liquid phases of the soil and the relationship of tillage problems to physical properties. Several papers were devoted to investigations of the