WORKSHOP RECOMMENDATIONS

Recommendations to Pacific Commonwealth Governments

Commonwealth South Pacific Governments are called upon to:

1. Determine and declare an appropriate degree of priority to be accorded to science education within the national context.

2. Identify and spell out the objectives of science education in their national institutions within the context of its overall National Development Plan, and the stated objectives of its educational policy.

3. Establish where they do not already exist, and adequately staff, curriculum development units in order to evolve curricula that serve the country's national needs through education, so as to ensure that what is taught in educational institutions is relevant to such needs.

4. Establish within such curriculum development units a science equipment development section wherever one does not exist. The aim of such a section should be to ensure the availability of science equipment and materials in schools and colleges at minimum cost by whatever means are appropriate to the national education system, including repair and maintenance, selective importation, and local production from prototypes.

5. Support the teaching of science on a practical basis at all levels of education by making adequate provision for teachers as well as equipment so as to provide a sound foundation for producing scientists, technologists and technicians.

6. Regard in-service training both locally and overseas as a regular, continuous exercise, designed to up-grade knowledge and skills, especially those of the science teachers in the rapidly expanding body of scientific information. Such in-service training should equip untrained teachers with urgently needed basic training and up-date the skills of already trained teachers. In this connection the assistance of the Commonwealth Secretariat as well as Unesco, and other international and regional bodies should be explored.

7. Regard the well-planned pre-service training of all teachers in science education as essential. Such training should include exposure to national curricula and training in the use of local resources and production of low-cost science equipment.

8. Provide scholarships/bursaries, including study visits and attachments for persons working in science education, to enable them to receive training at suitable centres in curriculum development, and the maintenance and production of science equipment and materials.

9. Encourage active collaboration between Ministries/Departments of Education, Industries, Works, Agriculture, Health and other relevant science-oriented Departments of Government as well as appropriate private-sector organizations in order to develop and ensure the use of suitable locally available science equipment and materials. Collaboration should also encourage the use of common educational programmes.

10. Ensure, through appropriate legislation, that where importation is necessary, science equipment, chemicals and material required for the local production of science teaching equipment is imported at the lowest possible cost and with the minimum of delay.

11. Encourage the formation of national Science Teachers' Associations in countries of the region where they do not already exist, and support their national and international roles where such Associations do exist, if necessary by seeking the assistance of international and regional agencies having special interest in science education (e.g. CASME, ICASE, UNESCO, UNICEF and RECSAM).

12. Provide, in view of the general shortage of experienced science teachers and ancillary staff, career incentives in order to attract and retain such science education personnel at all levels. Such incentives would include avenues for promotion within the various cadres, official contribution towards the travel costs of approved in-service training meetings, and professional recognition of in-service courses for purposes of advancement for serving officers, as well as special allowances for science teachers.

For Regional Action

13. All Commonwealth South Pacific Governments are invited to increase their regional co-operation in education and, in particular, in science education through the establishment of a Commonwealth South Pacific Science Equipment Centre as proposed in the following annexe. Such a centre will assist in reducing the problems of availability of low-cost science equipment in member states through improved importation mechanisms, maintenance, local development and production of suitable equipment relevant to national curricula.

ANNEX TO RECOMMENDATION 13

COMMONWEALTH SOUTH PACIFIC SCIENCE EQUIPMENT CENTRE

It was recommended that the above proposed centre should have the following aims and objectives, structure and management:

Aims and Objectives

(a) To assist member countries in ensuring the availability of science equipment and materials in schools and colleges at the minimum cost possible and by whatever means are appropriate to their national education systems.

(b) To pursue in consultation with governments all relevant steps which will encourage the effective teaching of science through availability of science equipment materials in the region.

(c) To set up or encourage the setting up of national science equipment centres within curriculum units in ministries of education in member countries in the region and to maintain liaison with these centres in order to ensure that the provision of equipment is always directly related to their curricula.

(d) To maintain constant liaison with other regional centres throughout the Commonwealth and in other countries engaged in similar activities.

(e) To assist with the setting up of national and local production and distribution centres wherever economically appropriate.

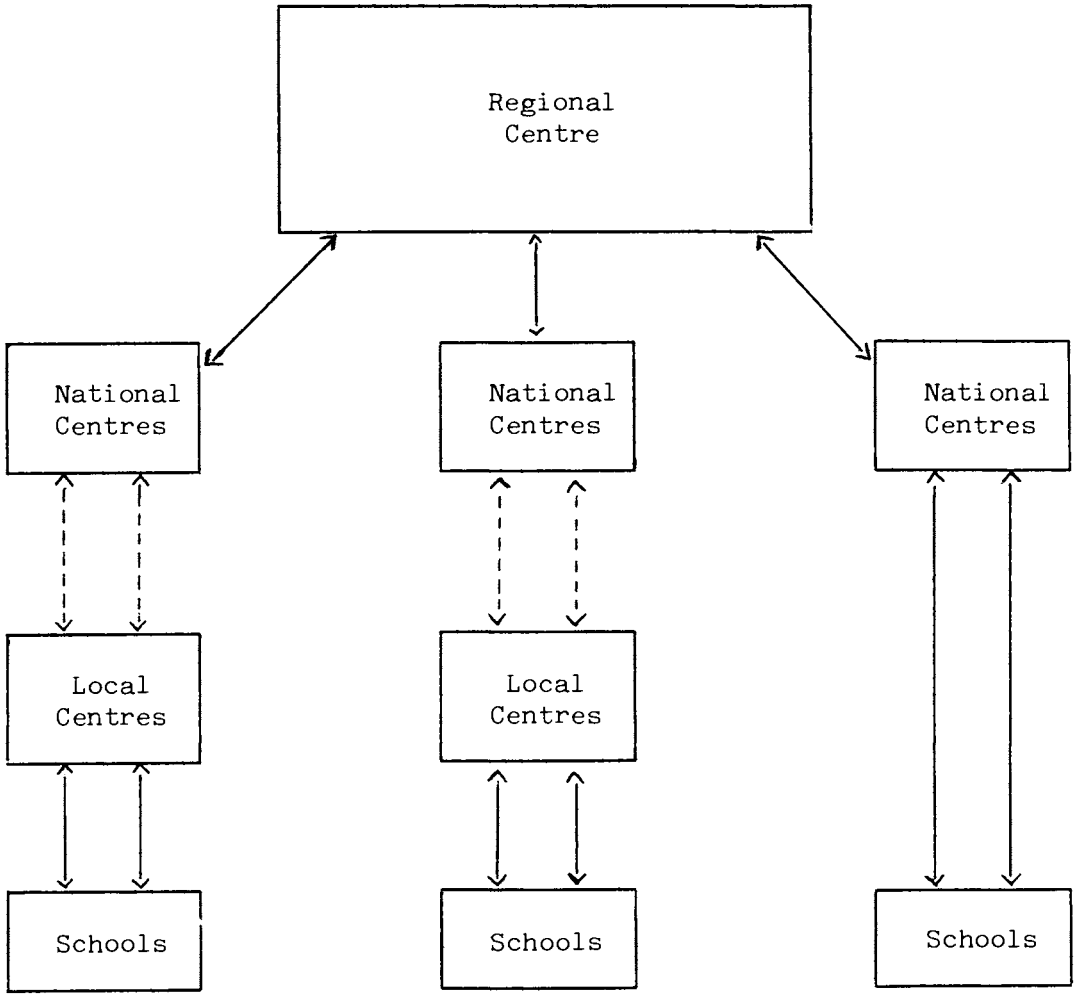
Structure and Management

A governing council should be established consisting of Permanent Secretaries or Secretaries for Education of Commonwealth governments of the region, as well as representatives of relevant regional organizations which shall report to the Regional Meetings of the Ministers of Education.

Funding

Initially, a request should be forwarded by the governments of the region to the Commonwealth Secretariat to assist with the establishment of the Centre. It is envisaged, however, that a phased programme of contributions by member governments will enable the Centre to be wholly supported from within the region.

Suggested Structure of the Regional and National Equipment Centres



National Science Equipment Centre(s)

Without delay each member country should establish a national equipment centre. This centre should be closely related to, or be part of, the curriculum development centre or unit of the Ministry of Education and should:

(a) Ensure, at the minimum cost, the availability of suitable science equipment and materials in schools and colleges.

(b) Pursue all relevant steps which will encourage the effective teaching of science through availability of low-cost equipment and materials.

(c) Establish and maintain, wherever appropriate, a local centre or centres. For example, these could begin as units in suitable, strategically located educational institutions teaching industrial arts or manual skills. Such units should be equipped and used to produce, as part of the institution's curriculum, science equipment items (e.g. test-tube racks, clamps, stands) so as to improve local availability, and reduce supply and distribution problems.

(d) Maintain constant liaison with the regional centre, once it is established (see diagram on page 8) and other national centres within the region.

(e) Review present distribution systems of science materials to schools and wherever necessary make changes to improve the efficiency of these systems.