

## Science and Technology

The Secretariat continues to promote the development and maintenance of co-operative networks in new and emerging areas of science and technology. It does so to assist member countries increase their capability and expertise in these areas – and to meet their obligations to international agreements, especially those relevant to sustainable development.

Secretariat activities in this sphere are conducted through the work of the Commonwealth Science Council (CSC) which, in 1998 and 1999, reviewed its work programme and approved an overhaul of its mechanisms for programme initiation, development and delivery.

In December 1998, a new mechanism for encouraging collaboration in science and technology among member countries was introduced: the Commonwealth Knowledge Network (CKN). It will enable the sharing of existing knowledge and experience while seeking solutions to problems through networks of scientists, scientific institutions and knowledge banks throughout the Commonwealth.

The CSC continues to develop partnerships with key international organisations (donors, intergovernmental organisations, NGOs) and to work in its four flagship programmes of biodiversity and genetic resources, water and mineral resources, energy and capacity-building.



The Commonwealth works to increase the capability and expertise in science and technology among member countries

### Biodiversity and Genetic Resources

Biological resources are the natural capital that many economies, especially in developing countries, depend on. The conservation and sustainable use of these resources, as outlined in the Convention on Biological Diversity (CBD), Agenda 21 and other environmental instruments, are important. The CSC has identified niche areas where it assists countries to meet their obligations under these instruments, including by encouraging collaboration among countries through biodiversity and biosafety focal points and the Biodiversity Clearing House, which is a sub-network of the CKN. It has helped identify priority areas for capacity-building and for the exchange of information and knowledge on biosafety issues through a knowledge network.

Member countries need to be aware of their obligations under the international Trade-Related Aspects of Intellectual Property Rights (TRIPs) agreements. In



Special projects encourage the development of women scientists

this area, for example, the CSC has organised discussions on various aspects of TRIPs and a May 1999 meeting with the Centre for Science and Technology of the Non-Aligned and other Developing Countries in New Delhi, India, led to the

formation of a pan-Commonwealth network on intellectual property rights.

In collaboration with the Committee on Science and Technology in Developing Countries, the CSC has encouraged the exchange of information on bioactive natural products, which are environmentally benign substances for human, animal and plant health care, and include many other substances of commercial and cultural importance. A network for sharing knowledge and forming partnerships between North and South was formed.

Assistance is provided to countries to operationalise their clearing house mechanisms under the CBD and to implement a number of other agreements, including the UNEP International Technical Guidelines on Biosafety.

The CSC has supported a workshop in Sri Lanka to build capacity in the collection,

### Network for Water Information

Freshwater is a finite and limited resource needed in all aspects of life. Small islands in particular are aware of how limited it can be as their freshwater supply is dependent on what rainfall can be collected. Information on the occurrence, use and management of freshwater resources is therefore useful for the maintenance of current sources and the planning of future development.

The Small Island Water Information Network (SIWIN), established by the CSC in partnership with the UK Government's Department for International Development and the British Geological Survey, is a forum which provides information on water issues to professionals and civil society in small island developing countries in all regions. SIWIN, for example, allows professionals from the Pacific,



Information on water matters is important especially for small island states

Caribbean and Indian Ocean islands to share information on water project developments, where once they were isolated.

SIWIN has now launched a central site on the Internet (<http://www.siwin.org>) in addition to the web sites established in regional nodes.

identification and taxonomy of lichens, which are important indicators of global environmental change. In 1998 and 1999, it organised meetings in India, Kenya and Zimbabwe to exchange ideas and experiences of reversing land degradation using agroforestry methods.

### Water and Mineral Resources

Many people depend on groundwater for their water supply. Unfortunately, these supplies are often vulnerable to pollution from sewage and landfill sites. The CSC has therefore developed a programme of water resources management involving users and stakeholders. A workshop in Trinidad and Tobago transferred some of this management experience to small island water professionals in the Caribbean. The Small Island Water Information Network (SIWIN) has allowed the professionals in the Caribbean, Mediterranean, Indian Ocean and the South Pacific to share information and knowledge among themselves as well as with others.

In May 1998, the CSC organised a meeting of the Commonwealth Geological Survey Forum to enable member countries to be aware of new trends in mineral resources development, especially as they relate to technology and environmental conservation, to open contacts for business development and to enhance linkages. An informal network has been set up, and meeting and exchange of ideas every two years was agreed.

### Energy

The CSC continues to assist member countries to improve quality of life, especially in rural areas, by adopting and using sustainable energy practices. In



Adopting and using sustainable energies, as with these solar panels

October 1998, the CSC, in collaboration with the Caribbean Planning for Adaptation to Global Climate Change, UNDP and UNEP organised a regional meeting to discuss the implications of the Clean Development Mechanism of the Kyoto Protocol for small island states, with special reference to Caribbean countries. It resulted in the formation of a network of organisations to undertake follow-up work and the CSC has been invited to join a steering committee for the Caribbean Renewable Energy Development Project which is funded by the Global Environment Facility.

Work continued on promoting solar drying of agricultural produce with workshops held in Guyana and Tanzania to provide training in processing solar dried agricultural produce, the development of small businesses, and the creation of market links.

The CSC is also involved in activities of the World Renewable Energy Network.

### Capacity-Building

The CSC continues to assist member countries tackle environmental pollution through its programme on Chemical Research and Environmental Needs (CREN). A recommendation from a 1996 CSC seminar led to financial support from the Asian Development Bank in 1998 for a world-class facility for testing and monitoring chemical residues in exportable crops, the Sri Lanka-Commonwealth Centre for

Seeking a scientific solution for environmental concerns arising from the tanning industry



Chemical Residue Analysis in Colombo, Sri Lanka. In November 1998, a knowledge-based network to tackle problems of environmental control in modern mining was initiated during a CSC workshop in Darwin, Australia.

In March 1998, the CSC held a training workshop in Bangalore, India, on the use of low-cost instruments for monitoring the environment and donated equipment to participating countries to test their suitability for environmental education. These kits are being used in schools and community

programmes for education and investigations of air pollution. The data collected are incorporated into the CREN/CSIRO Airwatch Networking Programme.

Work on groundwater contamination by arsenic in Bangladesh and India, and on the environmental consequences of tanning leather, which provides substantial employment and is of great economic potential, also continued.

The CSC helps member countries train women scientists and technologists in the use of information technology to enhance their work. In November 1997, a training course for women scientists was held in Bangladesh.

The Commonwealth Network on Earthquake Resistant Construction in New Zealand expanded coverage and reach through institutional linkages and contacts and is being re-configured into a knowledge network dealing with natural disasters.

The CSC continued to assist member countries to encourage the growth of a science and technology culture. In February 1998, education and science experts met in Lilongwe, Malawi, and three months later in Port of Spain, Trinidad and Tobago, to draw up strategies and action plans for national, regional and pan-Commonwealth implementation. The CSC, in collaboration with a UK science discovery centre, initiated CommQuest, an exhibition which is designed to stimulate interest in science and technology, especially in young people. CommQuest will be exhibited at CHOGM 1999 in Durban.