

MAJOR FACILITIES

The Research Centre operates several state-of-the-art laboratories and facilities which are available to university researchers as well as interested parties from government and industry.

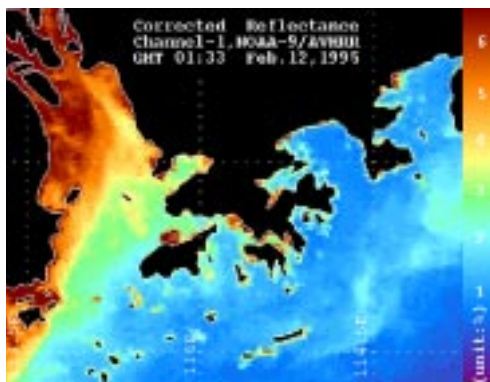
ENVIRONMENTAL FACILITIES

Over 1000 m² of modern, well-equipped experimental and testing space for environmental research is available in the Environmental Laboratories. These comprise an analytical laboratory, a pilot plant facility room, air pollution studies laboratory, clean rooms, an environmental biotechnology laboratory and a water pollution laboratory. The Centre has an Environmental Field Station in Shenzhen located in a 300 hectare mangrove swamp and also jointly operates a Marine Environmental Station in Sanya, Hainan Island.



Major equipment available in these facilities include the following: triple-stage quadruple mass spectrometer, process mass spectrometer, gas chromatographs, Fourier transform IR spectrophotometer, ICP emission spectrophotometer, HPLC/FPLC, atomic absorption spectrophotometer, automatic ion analyzer, Microtox, high speed centrifuges, environmental chambers and voltmeter.

The Research Centre also maintains its own Sea-WIFS HRPT satellite receiving station, data from which is analysed and archived in the remote sensing laboratory. Additional future links are planned to improve environmental monitoring from satellite information as newer satellites are launched.



Sediment Load – Pearl River

A number of permanent monitoring stations for collecting a variety of scientific and environmental data in the South China Sea will be established in the near future.

COMPUTER FACILITIES

Many of the Institute's activities require various kinds of computing and technical support. In addition to the extensive central computing resources provided by the University, the Institute for Environment and Sustainable Development has direct access to all facilities operated by the Research Centre. These include several additional specialized computer facilities which support the Institute's research and development initiatives. Two of the more notable facilities within this group are the Mini Super-computer and the GIS facility.

Silicon Graphics Origin 2000 Server

Jointly acquired, housed and operated by the Research Centre and the School of Science, this powerful 20 CPU parallel processor can perform up to 10,000 mips. The Origin Server will be used to support computationally intensive applications such as atmospheric modeling, hydrodynamic modeling of water movements in the South China Sea as well as pollution transport and dispersion studies. The Origin 2000 Server offers the computational power required for cutting-edge research, providing a dedicated local capability for large scale modeling efforts to support Hong Kong's infrastructure and environmental planning and development needs.



Mini Super - computer

Geographic Information Systems Facility (GIS)

Over the past one and a half decades, the use of spatial information systems for data capture, display, analysis and management support has grown remarkably in terms of the power of its applications, and the amount of data available through information networks. The potential for this technology to aid in purely environmental studies or environmental impact analysis arising from planning, development, operation and maintenance of infrastructure and industrial systems is unparalleled. Moreover, the general availability of sophisticated, low-level access to information through internet services such as World Wide Web opens a whole new dimension, and market, for the use of spatial (and other) data.

Recognizing the need for environmental applications development, database development and data management, the Institute has established a GIS facility to

meet the growing need for spatial information management, analysis and display functions. The facility is staffed by one computer officer and one engineer who support the use of GIS by various research groups and projects. Bilingual GIS, environmental data management and integration of remote sensing data are just a few of the priority areas for research and development now being pursued by the Institute.

