Background to the Delivery of the Coastal Resources Information System

Guyana Gets a Coastal Resource Information System for Environmental Management including Adaptation to Global Climate Change

The Environmental Protection Agency (EPA) have benefited from the receipt of a Coastal Resource Information System (CRIS), associated training and equipment, as well as mapping data under the aegis of the Caribbean Planning for Adaptation to Global Climate Change (CPACC) Project.

The CPACC Project is a four-year initiative serving twelve CARICOM countries. The project's overall objective is to support participating countries and relevant institutions prepare to cope with the adverse effects of Global Climate Change (GCC), particularly sea level rise through vulnerability assessment, adaptation planning and related capacity building.
Specifically, assistance has been provided to:

- Strengthen the regional capability for monitoring and analyzing climate and sea level dynamics and trends, seeking to determine the immediate and potential impacts of GCC;
- Identify areas particularly vulnerable to the adverse effects of climate change and sea level rise;
- Develop an integrated management and planning framework for cost-effective response and adaptation to the impacts of GCC on coastal and marine areas;
- Enhance regional and national capabilities for preparing for the advent of GCC through institutional strengthening and human resource development; and
- Identify and assess policy options and instruments that may help initiate the implementation of a long-term programme of adaptation to GCC in vulnerable coastal areas.

The CRIS is a management information system based on linking spatial or map-based information such as roads, coastlines, land use and rivers with other important data such as population distribution, coastal characteristics such as economic and recreational uses, and other environmental data. The purpose of the CRIS is to make relevant information available for planning and management, particularly as it relates to adaptation to the impacts of GCC.

The development of the CRIS for each country has been based on a detailed examination of available data working with local counterpart agencies such as the EPA and the Hydrometeorological Department. The CRIS was designed to allow wider and more effective access to information that may previously have been restricted due to the format of storage and the lack of a common reference system. This activity was seen as a process which has been started, but which requires continual development and adaptation to meet institutional and national priorities.

To ensure that the CRIS could be properly applied and adapted in each country, the CPACC Project implemented a comprehensive capacity building process which included the provision of computer equipment, computer software and very importantly and extensive training programme. Each country lead agency for the CRIS is being provided with a geographic information systems (GIS) workstation as well as GIS and Microsoft software valued at almost US $5000, or in the case of Guyana US $6200.

The training involved has been conducted over the period of the CRIS development and has been structured to complement the major phases of the development. Four topics were conducted over three separate weeklong regional training workshops. The topics addressed were: Metadata Development; Data Automation/Conversion; Database Development and CRIS Administration; and Feature Extraction.

Beyond the regional workshops, additional training to strengthen the designated CRIS beneficiary agencies was also provided. A representative of the EPA benefited from a CPACC scholarship for a University of the West Indies (UWI) one-year Certificate in Geographic and Land Information Systems (CGLIS) diploma program over the period 1999-2000. The CGLIS involved six one-week modules in Trinidad or Barbados followed exams and then the submission of a project for final certification.

The benefits of the CRIS development and capacity building activity have already been demonstrated in Guyana with the adaptation and application of the CRIS approach in a pilot Sea Defenses Management Information System (SDMIS) application for the island of Leguan. The SDMIS was developed by Mr. Rajkumar Singh of the EPA in collaboration with the Sea Defenses Unit and illustrates the efficiency and effectiveness of applying spatially referenced information systems to capital and engineering works.