

Spatial Information System for Health Centers

CEGIS developed a Spatial Decision Support System for selecting suitable healthcare facilities around the rural health centers. The project was conducted for NGO Service delivery Programme (NSDP) of Pathfinder International and funded by USAID. The software is unique of its type. It has a built in GIS developed with Map Objects that can run without licensed GIS software.

Digital Archive of Satellite Images

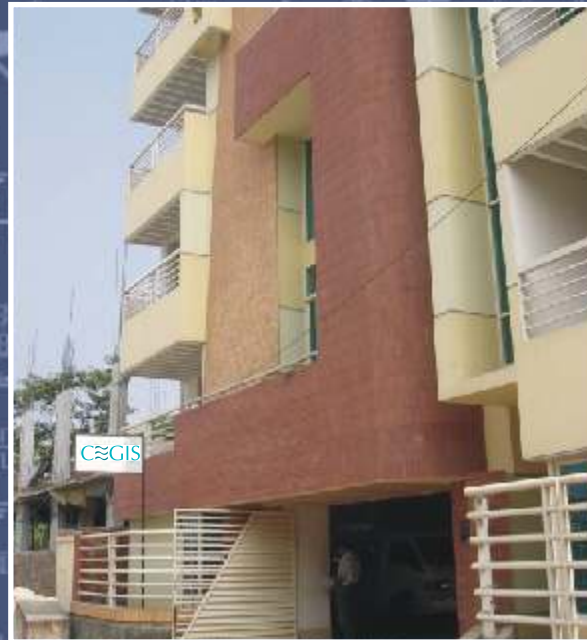
CEGIS has a huge collection of remote sensing images, old maps, and aerial photographs of the country of various locations and time in the digital format. All these images are archived properly for easy and quick access. LANDSAT TM, SPOT, IRS and IKONOS images have been used for different applications in various projects.

Flood Extent Mapping by RADAR Satellite Image

CEGIS has developed a unique methodology for flood extent mapping using RADAR images. Over the last five years CEGIS has been monitoring flood extent during monsoon and providing outputs to various government, non government and donor agencies.

Decision Support System for Cyclone Shelter Management

The DSS for Cyclone shelter management is a GIS based software tool that enables decision makers in both national and local level to allocate funds and to identify optimum locations for building shelters. The software was developed for CARE Bangladesh funded by USAID.



House #6, Road #23/C, Gulshan-1, Dhaka-1212, Bangladesh
Phone: 8821570-2, 88217648-52, Fax: 880-2-8855935
Email: cegis@cegisbd.com, www.cegisbd.com

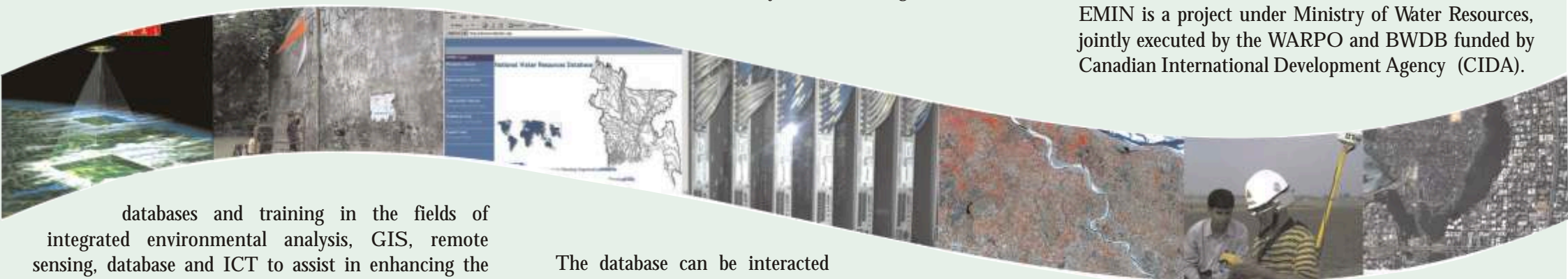
GIS and IT Applications



CEGIS' mission as a scientifically independent center of excellence is to support the management of natural resources for sustainable socio-economic development using integrated environmental analysis, geographic information systems, remote sensing, and information technology.

Introduction

Use of Geographic Information is becoming an essential element for natural resource management and planning. Production, processing and management of geographic information is costly and time consuming. Capacity for handling geographic information is still very much limited in Bangladesh, both in Government and Private Sector. To build and retain the capacity for handling, processing and analyzing geographic information, the Government of Bangladesh (Ministry of Water Resources) established the Center for Environmental and Geographic Information Services (CEGIS) as a public trust. The objective of the trust is to continue to function as a center of excellence for advisory services, research,



databases and training in the fields of integrated environmental analysis, GIS, remote sensing, database and ICT to assist in enhancing the quality of planning, implementation and monitoring of projects/programs in both public and private sectors. CEGIS is the leader in developing large web enabled spatial databases, spatial decision support system, and satellite image processing and geo-information development.

The Secretary of the Ministry of Water Resources is the chairperson of the trusty board. Other trust members are mostly representative head of the public organizations of the major sectors.

CEGIS' services and products are broadly classified into two groups namely Environment and Information

Technology. The organization has currently three service units, namely Integrated Environmental Analysis, GIS-RS, and Database & IT.

Some of the major projects conducted by CEGIS are:

National Water Resources Database for Water Resources Planning Organisation (WARPO)

NWRD is one of the largest databanks in the country related to the water sector. It contains information on over 30 different organizations and more than 300 data layers relating to planning and design. NWRD has been set up to meet the demand of planners and to provide data with reasonable accuracy from a single database.

The database can be interacted through a web portal with classified access. The database is developed in ORACLE and ArcGIS.

Integrated Coastal Resources Database (ICRD) for ICZMP of WARPO

CEGIS is now developing Integrated Coastal Resources Database (ICRD) a knowledgebase system for Integrated Coastal Zone Management Plan of Water Resources Planning Organisation. (WARPO). This database will also be integrated with the National Water Resources Database containing information related to coastal zones of Bangladesh. The database will be developed using ORACLE, Spatial Database Engine (SDE) and ARC-

GIS. End users will access the database through a ASP based web portal with different advanced tools for retrieval, processing and analysis of information.

Bangladesh Aquatic Biodiversity Information Services (BABIS) for Department of Fisheries (DoF)

BABIS is a web portal for sharing and disseminating Aquatic Biodiversity related Information. The portal contains GIS and attribute information on fisheries, water bodies, and other aquatic animals and vegetations.

Environmental Monitoring Information Network (EMIN)

EMIN is a project under Ministry of Water Resources, jointly executed by the WARPO and BWDB funded by Canadian International Development Agency (CIDA).

The ICT Development Group of Canada is the main contractor of the project where CEGIS is the Bangladeshi counterpart. The project aims to develop easily understandable materials for disseminating disaster related information to be used in disaster management in local, regional and national level. The project established a communication network combining GIS and Remote sensing based flood prediction, monitoring model, mobile SMS service for disseminating information at local level. The system uniquely combines GIS, Remote sensing, visual programming and CTI application.