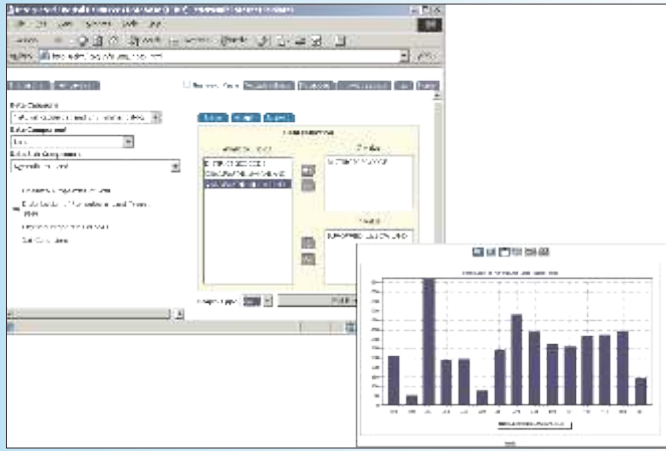


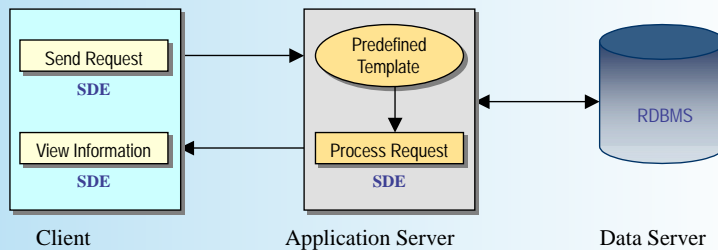
Information Generator

This tool generates information on the basis of available primary data in the database. It generates the information by performing statistical analysis on tabular data.



Mapping tool

This tool will give the facilities to represent the spatial, temporal and attribute data using predefined template and also user can customize the template for presentation of data and information for the report. Logical flow of this tool is shown below. It is under construction.



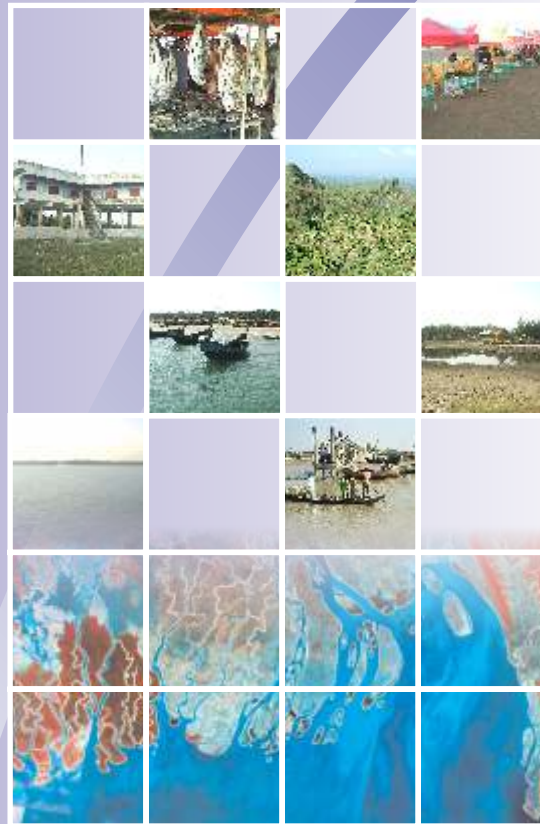
Linkage among databases

ICRD is being developed as a part of a knowledge pool. This pool will be created connecting all the relevant national, regional and local level databases. The characteristics of linkage among different databases will be different. WARPO is on the way to develop or finalize policies and guidelines on data sharing, spatial and time series data quality, data standardization and other exchange protocols. In the process of developing NWRD, ICRD and linkage between them the policies and guidelines will be followed accordingly.

Dissemination and Documentation

Once the ICRD preparatory phase is completed, some of the dissemination materials would be produced, so as to disseminate the functionality of ICRD tools, planning tools and information or knowledge about the coastal zone.

All the process including database design and construction, development of the metadata, data capturing and processing, development of application tools, data quality, database management etc., are being documented.



Development of ICRD Integrated Coastal Resources Database

WARPO
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Developed by:
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House #6, Road 23/C, Gulshan-1, Dhaka-1212, Bangladesh, Tel: 8821570-2, 8817648-52, Fax: 880-2-8855935, 8823128, Email: cegis@cegisbd.com, <http://www.cegisbd.com>

The purpose of developing the Integrated Coastal Resources Database is to have better information and a better understanding of coastal conditions and processes in support of ICZM.

In order to strengthen enabling institutional environment the draft Coastal Zone Policy (CZPo) proposed to set up an Integrated Coastal Resources Database (ICRD). The establishment of the ICRD is insisted in order to strengthen meaningful participation of relevant agencies by linking ICRD with other databases and facilitating the formulation of agreed guidelines that will enunciate the principles of common standard, protocols, and data sharing.

Design Architecture

The Web enabled ICRD is designed and developed using 5-tier architecture. It consists of the following layers.

- ❖ Presentation
- ❖ Application Server
- ❖ Data Server
- ❖ Web Server
- ❖ Spatial Data Engine

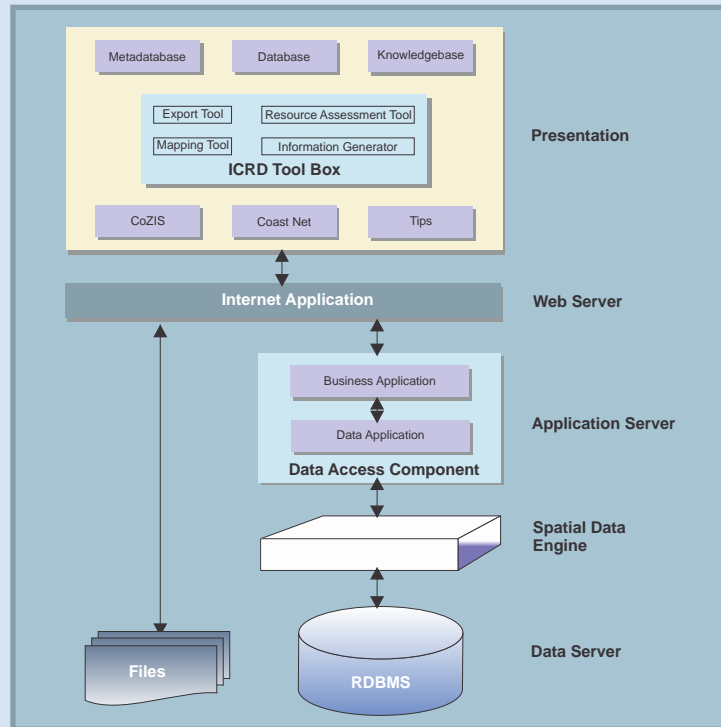


Figure1: The system architecture

In ICRD data has been kept into six groups. The groups are:

- ❖ Natural resources and environment (NRE)
- ❖ Human beings and social conditions (HUM)
- ❖ Infrastructure and services (INF)
- ❖ Economics and finance (ECO)
- ❖ Administration and institutions (ADM)
- ❖ Funds and interventions (FUN)

Based on major environmental components and for better browsing ICRD data are categorized into 15 groups:

- ❖ Agriculture
- ❖ Culture and Tourism
- ❖ Infrastructure
- ❖ Fisheries
- ❖ Forestry
- ❖ Natural Disaster
- ❖ Land
- ❖ Marine Resources
- ❖ Administration
- ❖ Water Resources
- ❖ Human, Social & Economic
- ❖ Institutions & NGO
- ❖ Biodiversity
- ❖ Climate
- ❖ Mineral Resources

Components

A user friendly web enabled application interface is designed and developed for facilitating the policy and management tasks of CZM planners. Following are the major components that are integrated with the ICRD:

- ❖ Metadatabase
- ❖ Database
- ❖ Knowledge
- ❖ ICRD Tool Box

Metadatabase

Metadata is data about data. It is a way of documenting information about datasets. ICRD metadatabase will enable intelligent and efficient access and management of data. Users can make decision on the usability of datasets for their intended use by using the metadatabase.



Database

This component is the data explorer which has been designed to display spatial and tabular data. ASP Map ActiveX DLL is used to view shapefile, which supports multiple layers superimpose. An advanced search facility has been included to filter the tabular data.



Knowledgebase

This component will be designed to bring together all available information and knowledge related to coastal area of Bangladesh.

Web portals related to coastal area e.g, Knowledge Portal on Estuary Development (KPED) etc. will be linked with the knowledgebase. Following application tools will be available:

- ❖ Resource Assessment Tool
- ❖ CoZIS
- ❖ Coast Net

Coastal Zone Information System (CoZIS)

This system will be designed to bring together all kind of information for a specific study area. All information is integrated and visualized by means of a map. The geographic interface assures easy and intuitive access to the information.

Coast Net

Coast Net will be the place on the Web where all professionals of line agencies and NGO involved in the development process of Integrated Coastal Zone Management come for the latest relevant information, knowledge, documents, publications, web links to other sites and for professional collaboration. Coast Net is a virtual meeting-place for everyone involved in coastal zone issues.

Resource Assessment Tool

This tool will facilitate to assess the different type resources available in the coastal area of Bangladesh. It will calculate the resource on the basis of data available and can present data and information in union, upazilla or district wise in graphical and tabular format. This is under construction.

ICRD Toolbox

It is collection of smart, efficient and well-defined tools expert enough to export data in desired format, perform statistical analysis, assess natural resources and represent spatial data in predefined format. Following tools are available in ICRD toolbox.

- ❖ Export Tool
- ❖ Information Generator
- ❖ Mapping Tool

Export Tool

This tool facilitates the user to export the data in their desire format. The most commonly required formats are available for exporting data for further analysis and presentation. Export Tool allows user to filter fields (columns) and records (rows) using "Field Selection" and "Criteria Selection" facilities available with it.

