GEOGRAPHIC INFORMATION SYSTEMS AND IT SOLUTIONS FOR THE ENVIRONMENT
Mission

**Mappamondo GIS** is a worldwide operating business offering Geographic Information Systems and IT solutions to assist environmental management.

We take advantage of GIS, remote sensing, spatial analysis and software development technologies to support a variety of environmental management efforts.

Through its qualified instructors Mappamondo GIS offers the latest in GIS and IT training at all levels and delivers on-demand courses for your industry.

We focus on

- Geographic Information System and IT enterprise solutions
- Database creation, management and conversion
- Geodatabase migration
- ArcObjects application development
- WebGIS development using ArcIMS
- Advanced webGIS development based on ArcServer latest technology
- GIS and IT training

Solutions

**GIS and Cartography**
From data digitizing to highly sophisticated webGIS applications.

**Software development**
We customize or create software to fit your exact needs

**Data management**
High performance, user friendly, web enabled database management systems

**Remote sensing**
Integration of Remote Sensing and GIS for environmental monitoring and natural resources mapping

**Environmental monitoring**
Capability to monitor the biological and physical environmental components
Training

Mappamondo GIS offers a wide range of training and professional development tools through its qualified instructors.

Other courses
- Using Spatial Analyst ArcGIS extension
- Geoprocessing concepts and tools
- Geodatabase concepts and design
- Editing in ArcGIS
- WebGIS with ArcIMS
- Working on the field with Arcpad
- Relational Databases Theory and Design
- Programming with Visual Basic

Tools

GIS
ArcGIS 8.x/9.x, Spatial Analyst, 3D Analyst, Geostatistical Analyst, Network Analyst, Tracking Analyst, ArcIMS, ArcSDE, ArcServer, ArcPAD, Mapinfo, Open Source GIS.

Database Management Systems
Oracle, SQL Server, Access, MySQL and others.

Development
Visual Basic 6, VBA, ADO, ASP, .NET, ArcObjects, MapObjects, ArcPAD Application Builder, XML, ArcXML, VBScript, JavaScript, PHP.

Portfolio

Since 1997 Mappamondo GIS staff has been involved in several national and international projects within the public and private sectors.

International
- NOAA Fisheries, Hawaii, USA
- Great Barrier Reef Marine Park, Australia
- James Cook University, Australia
- Department of Marine and Wildlife, American Samoa
- NOAA NURP, The Bahamas
- Caribbean Marine Research Institute, The Bahamas
- Bahamas Cave Foundation, Florida, USA
- Kadme, Norway
- Total, Norway

Italy
- Environmental Protection Agency
- Emilia Romagna Region
- Parma Province
- Po watershed authority
- Italian birds fauna protection agency
- Emilia Romagna Homeland Security
Fishery Analyst is an ArcGIS 9.x extension developed to effectively analyze and visualize temporal and spatial patterns of fishery dynamics. The main functions are quantitative estimation and visualization of catch and effort and their variation in space and time, analysis of fishing vessel utilization, data quality control, and deriving information on the location of important economic and threatened species. The application provides a user-friendly analysis interface allowing for easy and diverse output production. The interface allows the user to choose the analysis to perform (effort, catch density, catch per unit of effort etc) and to select data on criteria such as year, vessel name or size class, and fish species caught. The output can be generated as yearly, monthly, quarterly or user-defined date interval plots. Results can be plotted in pre-defined map layouts and saved in quantitative GIS data file formats (raster and vector) or as static maps. The application provides an option to produce non-confidential plots for data protected by confidentiality policies.
Protected Areas Network Design

Systematic network design aims to achieve a number of established conservation targets through the implementation of a system of Protected Areas. It also aims to minimize the cost associated to identified social, political and economic factors. The basic steps involve the identification of the conservation features and the establishment of conservation targets for each feature. The designer divides the managed area in a grid of planning units and tries to identify which combination of units will lead to the best conservation effort by meeting the targets at the minimum cost. Political, social and economic factors can be included to obtain complex cost estimations.

WHAT’S P.A.N.D.A.?

P.A.N.D.A. is a stand-alone application developed using Visual Basic and ArcObjects. It was developed to provide a user friendly framework for systematic protected areas network design to ARCGIS users. Through the use of P.A.N.D.A., the designer can explore different hypothetical configurations of a system of protected areas in the planning area. Conservation achievements and associated costs of each scenario are based on the available data and knowledge. The designer can edit the scenario by interactively modifying the status of the planning units among 4 managed categories. He can then explore the target table to see the resulting changes in conservation achievements of the new scenario and the associated costs. P.A.N.D.A. allows interacting with the software MARXAN by providing an easy way to run Marxan over the current scenario and display the results into ARCGIS format. ARCGIS data files are converted to and from Marxan data files in the background. The user can then use P.A.N.D.A. main interface to refine Marxan solutions. Additionally several auxiliary tools involved in systematic conservation network design are provided, including a tool to generate a grid of management units of the desired shape and size and an easy interface to add new conservation features and targets.

WHAT’S MARXAN?

When the conservation factors are numerous and the planning area is wide it is not possible to investigate all the possible conservation scenario. MARXAN is a conservation planning program that uses a mathematical algorithm called "simulated annealing" to identify a reasonably efficient portfolio of management unit that meets the specified targets and minimize cost factors. Marxan allows taking into consideration spatial factors like the PA network boundary cost and provide information on which units contribute the most to meet the conservation targets (concept of “irreplaceability”).
Welcome to Dive GIS in the rich of history and nature Marine Protected Area of Capo Rizzuto! Here begins the foundation for becoming a successful Geographic Information System user and a certified diver! Dive into the ESRI Authorized "Introduction to ArcGIS 9.x" and the PADI Open Water Diver courses, the most popular programs in the world in their respective fields! The course will additionally provide the overlap modules to introduce participants to GIS-based tools and techniques of marine scientists with underwater and computer sessions. Learn how to map marine habitats from satellite images and verify them on the field, perform marine fauna and flora surveys and find associations among all the biotic and abiotic components using GIS.
The GEODB Loader is an ArcObjects application for ArcGIS 9.x aiming to automate and speed up the process of converting and transferring spatial data from file based storage formats to a Personal or Enterprise Geodatabase or between Geodatabases. It is suited for both, one time operations, as well as for routine updates of a geodatabase.
The GPX converter is an ArcObjects Application that allows for easy conversion of your GIS data (shapefiles, feature classes in a geodatabase) to GPX format (the GPS Exchange Format). GPX is a light-weight XML data format for the interchange of GPS data (waypoints, routes, and tracks) between applications and Web services on the Internet. The GPX Converter is built for easy integration with ArcGIS and ArcIMS.