

Beyond Data Download: Data Analysis Tools

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Biographical Sketches of Authors

Edward Johnson is an environmental scientist in the National Centers for Coastal Ocean Science of NOAA's National Ocean Service with training and experience in environmental chemistry and toxicology. He joined the Center for Coastal Monitoring and Assessment in 1997 after twelve years with the USDA's Agricultural Research Service. Since moving to NOAA he has been active with the National Status and Trends Program particularly the Mussel Watch and Bioeffects Assessment Projects.

Percy Pacheco is an environmental engineer with the Special Projects in NOAA's Management and Budget Office. His responsibilities have been instrumental in the successful planning, design and data analysis of coastal pollution assessment projects. Percy is skilled in data synthesis and assessment, and advanced technical services (e.g., GIS and web mapping, database development, and information visualization tools). Nipa Parikh, also with the Special Projects Office is a skilled GIS specialist and expert computer programmer in the support and development of several applications in her division.

Jawed Hameedi is manager of NOAA's National Status and Trends Program, a comprehensive monitoring and assessment program to observe and report on coastal contamination and its associated biological effects in U.S. coastal waters and estuaries. The program also develops environmental indicators, guidelines, models and other diagnostic tools to infer the severity of contamination, forecast contaminant levels, and evaluate the performance of governmental programs to abate degradation of coastal ecosystems. Prior to joining NOAA, he worked in private industry and a university on energy and environmental sciences.

Abstract

The purpose of NOAA's thematic website is to provide easy access to data and information in a way that facilitates environmental assessment and decision making. Data from three long-term projects of the National Status and Trends Program (NS&T) are being compiled and managed to make them available over the Internet in a distributed data model system. The three projects are Benthic Surveillance Project, Mussel Watch Project, and Bioeffects Assessment Project.

The foundation of the web capabilities are built on three relational databases, one for each of the three major project areas of NS&T. These databases are built with the SAS software (SAS Institute, Cary, NC). Presently the databases are accessed with Active Server Pages (ASP) software. Enhancements are under way that utilize SAS web application software to access the SAS databases and dynamically produce web pages of information requested by the user. Data mapping tools allow the user to display the sampling locations on to overlay other geo-referenced data published on the web such as wastewater discharge locations, or satellite imagery. These web-based data analysis and display tools and protocols operate in a distributed information system environment (as opposed to a centralized data system) to improve data retrieval, mapping, analysis, assessments, comparative studies, and visualization capabilities for users with different levels of data and analysis needs. This web site is intended to also increase awareness and understanding of specific coastal issues (e.g., water quality) so that the coastal management community and the interested public can make more informed decisions about solutions to coastal resource use issues, many of which are of national and international significance.