

## **INTRODUCING THE INTERNATIONAL COASTAL ATLAS NETWORK (ICAN)**

*Dawn Wright, Oregon State University, Department of Geosciences*

*Ned Dwyer, Coastal and Marine Resources Centre, Ireland*

*Tanya Haddad, Oregon Coastal Management Program*

*Liz O'Dea, Washington Department of Ecology*

*David Hart, Wisconsin Sea Grant*

*Tony Lavoie, U.S. Department of Commerce, NOAA Coastal Services Center*

*Tim Nyerges, University of Washington, Department of Geography*

*Marcia Berman, Virginia Institute of Marine Science*

**KEYWORDS:** web GIS, data access, information management, decision-making tools, coastal informatics, coastal atlas, metadata, semantic interoperability, regional governance, interoperability

Over recent years, there has been significant development in various countries worldwide of national and regional coastal atlases based on web-enabled geographic information systems (GIS). These coastal web atlases (CWAs) are of great value to coastal decision makers, scientists and the general public, especially with regard to helping users keep pace with **changes** in data quality and availability, the associated information technologies, coastal landscapes/seascapes, and in coastal communities, their vulnerabilities, identities, and more. While multiple benefits are derived from these tailor-made atlases (e.g., speedy access to multiple sources of coastal data and information; economic use of time by avoiding individual contact with different data holders), the potential exists to derive added value from the integration of disparate CWAs in order to optimize decision making at a variety of levels and across broader geographical regions.

This panel will introduce the International Coastal Atlas Network (ICAN), a newly founded informal group of over 30 organizations from over a dozen nations who have been meeting over the past two years to scope and implement data interoperability approaches to CWAs. The mission/strategic aim of ICAN is to leverage the expertise of its members to find common solutions to CWA development (e.g., user and developer guides, handbooks and articles on best practices, information on standards and web services, expertise and technical support directories, education, outreach, and funding opportunities, etc.). It also seeks to encourage and facilitate global operational interoperability between CWAs in order to enhance data and information sharing among users, and assist in the translation of coastal science to coastal decision-making.

The panel will share results from its latest workshop on the theme "Federated Coastal Atlases: Building on the Interoperable Approach," where the strategic and governance structures of ICAN were developed. Also included will be a discussion for interested organizations of the benefits of membership in ICAN including: (1) receiving guidance and best practices for your own local CWA development from a community of experts in the information technology, GIS, data management and coastal/marine governance domains; (2) making your CWA interoperable with a larger universe of

resources and communication channels that are needed for effective marine spatial planning, resource management, and emergency planning; and (3) participation in teaching and learning activities organized by ICAN or other organizations in the CWA domain; and (4) collaborative research proposal development. And finally, the panel will report on the next phase in the development of a proof-of-concept prototype that inter-relates metadata and other information between two mature CWAs (the Oregon Coastal Atlas, [www.coastalatlas.net](http://www.coastalatlas.net), and the Marine Irish Digital Atlas, [mida.ucc.ie](http://mida.ucc.ie)). The approach leverages ontologies and semantic mediation (i.e., translations of terms and queries) using the Open Geospatial Consortium's catalogue services for the web (CSW), web mapping services (WMSs), and web feature services (WFSs), to our knowledge an unprecedented combination for coastal resource management.

Dawn J. Wright  
Department of Geosciences  
Oregon State University  
104 Wilkinson Hall  
Corvallis, OR 97331-5506  
*dawn@dusk.geo.orst.edu*  
(541) 737-1229