



Introduction to

**The Marine Irish Digital Atlas
(MIDA - <http://mida.ucc.ie/>)**

&

**The International Coastal Atlas Network
(ICAN - <http://ican.science.oregonstate.edu/en/home>)**

*Kathrin Kopke
Coastal & Marine Research Centre,
University College Cork, Ireland
k.kopke@ucc.ie*

History of MIDA

- development on the MIDA concept began 2002 with initial funding from the HEA
- The official MIDA launch was in 2006
- The key goal of the concept: *“to develop an updateable web GIS based data archive and informational resourceto provide a single source where people interested in coastal and marine information could visualise and identify pertinent geospatial datasets, and determine where to acquire them....”*
- Later funding was sourced from the Environment and Heritage Service of Northern Ireland 2005-2007

History of MIDA

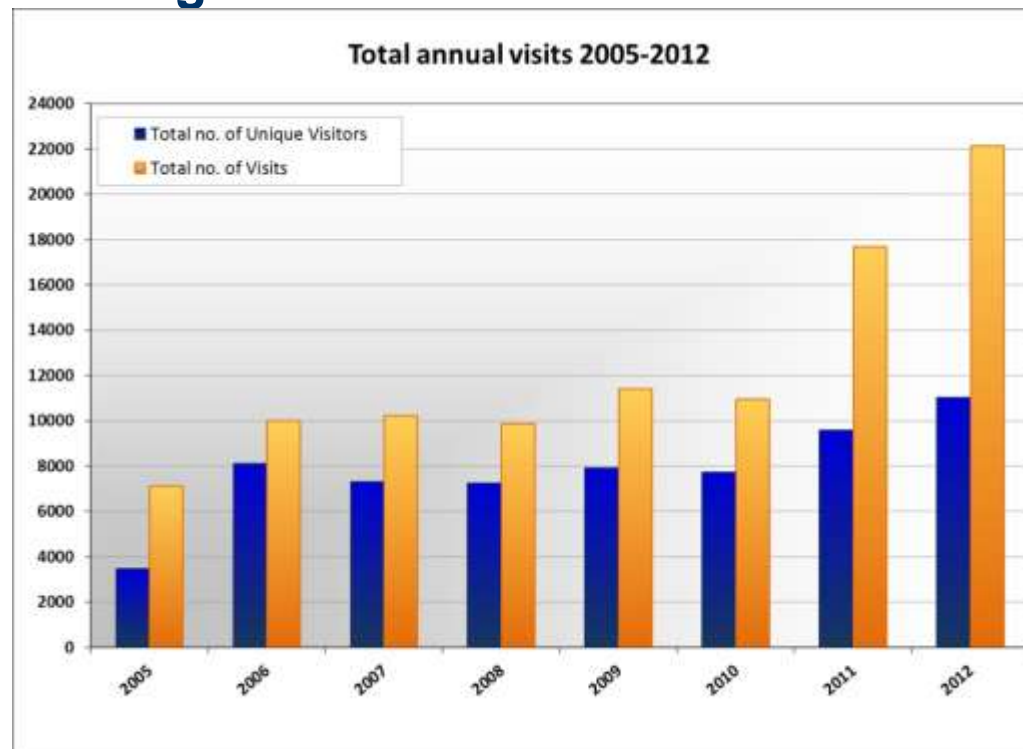
- User consultation and feedback influenced the end product substantially
- Intended MIDA audience: Anybody who is interested in coastal and marine information in relation to the Island of Ireland (e.g. students, tourists, professional user, researcher)
- Post funding website maintenance: voluntary contribution of CMRC staff plus a number of internship programmes:
 - ✓ Leonardo da Vinci vocational training programme,
 - ✓ Erasmus training programme
 - ✓ Marine Institute International Internship Programme
 - ✓ Jobbridge National Internship Programme

MIDA to date

- Provides coastal and marine information and data related to the Island of Ireland for a wide audience (students, general public and professionals)
- Provides up to date data and metadata for other CMRC projects and has been a training ground in GIS and metadata for at least fourteen national and international graduates
- Successfully captured a returning user community and attracted new visitors

MIDA to date

- On average 800 visits each month in the period 2005 -2011 with a doubling of this number in 2011/2012.



Data and Information Status



> 125 data layers



37 organisations



update and addition
of layers on-going

Data and Information

- List of MIDA layers in four thematic areas available from <http://mida.ucc.ie/pages/dataLayers.htm>
- All CMRC owned datasets are downloadable
- Non-CMRC data: Metadata and data download button will link to information in relation to the data owner and where to acquire the original data



Layers Prepared for Display in MIDA

Check more recently added layers

This table lists those geospatial layers which have been collected thus far or are currently being prepared for presentation in the MIDA. The data owner is also listed as well as the layer's status with respect to display in the atlas. If you would like further information regarding any of these layers, please do not hesitate to [contact us](#). Note that the layers are listed according to the four main MIDA categories.

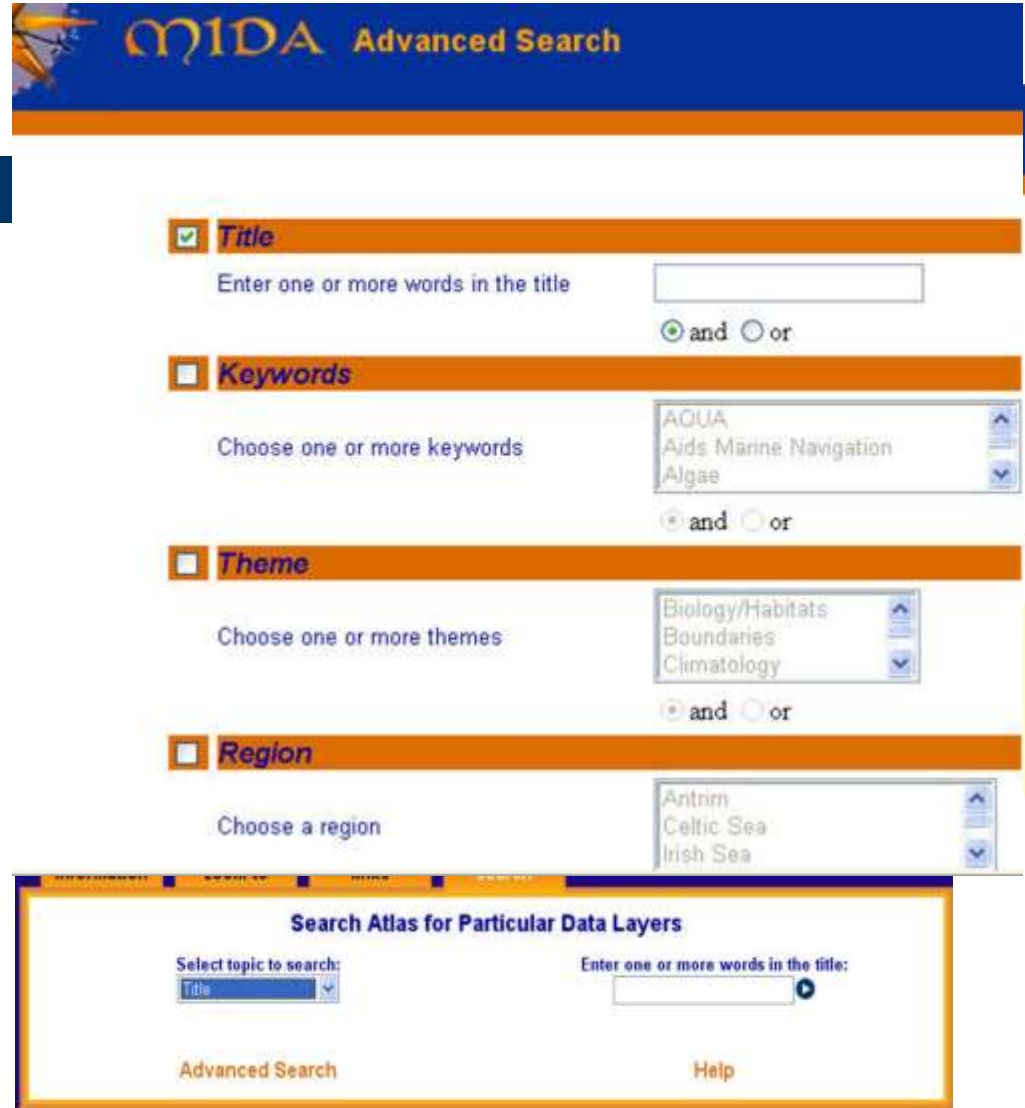
This list shows work done to date. Efforts are being made to acquire an exhaustive list of other data layers for display in the MIDA. If you have any data that you wish to advertise via the atlas, please look at our [contribute](#) page.

Management → Physical Environment → Biological Environment → Socio-Economic Activity

Name	Description	Owner	Status
Management			
AONB	Areas of Outstanding Natural Beauty	Environment and Heritage Service (EHS)	view
ASSI	Areas of Special Scientific Interest	Environment and Heritage Service (EHS)	view
Biosphere Reserves	UNESCO sites to promote solutions to reconciling conservation of biodiversity with sustainable use	CMRC	view
Border	Border of the Republic of Ireland	EPA, OSI	view
Celtic Sea Cod Spawning Box	Location of the Cod Restiction Area	CMRC	view
Coastline	Coastline of Ireland	OSI, GSHHS	view
Country Parks	Country Parks of Ireland	Environment and Heritage Service (EHS)	view
Clár Areas	Rural areas targeted for investment	National University of Ireland Maynooth	view
Current PND Authorisations	The current exploration authorisations given by the Petroleum Affairs Division (PAD)	Department of Communications, Energy and Natural Resources (DCENR)	view
Hydro-chemical properties	Station sites, North of Ireland Joint Agency Coastal Monitoring Program (NIAJCMIP)	Department of Agriculture and Rural Development (DARD) / Agri-Food and Biosciences Institute (AFBI)	view
High & Low Watermarks	High & Low Watermarks	OSI	view

Data and Information

MIDA is searchable for data from the Information Box below the interactive map area via general topic or advanced search



MIDA Advanced Search

Title
 Enter one or more words in the title
 and or

Keywords
 Choose one or more keywords
 and or

Theme
 Choose one or more themes
 and or

Region
 Choose a region

Search Atlas for Particular Data Layers

Select topic to search:
 Enter one or more words in the title:

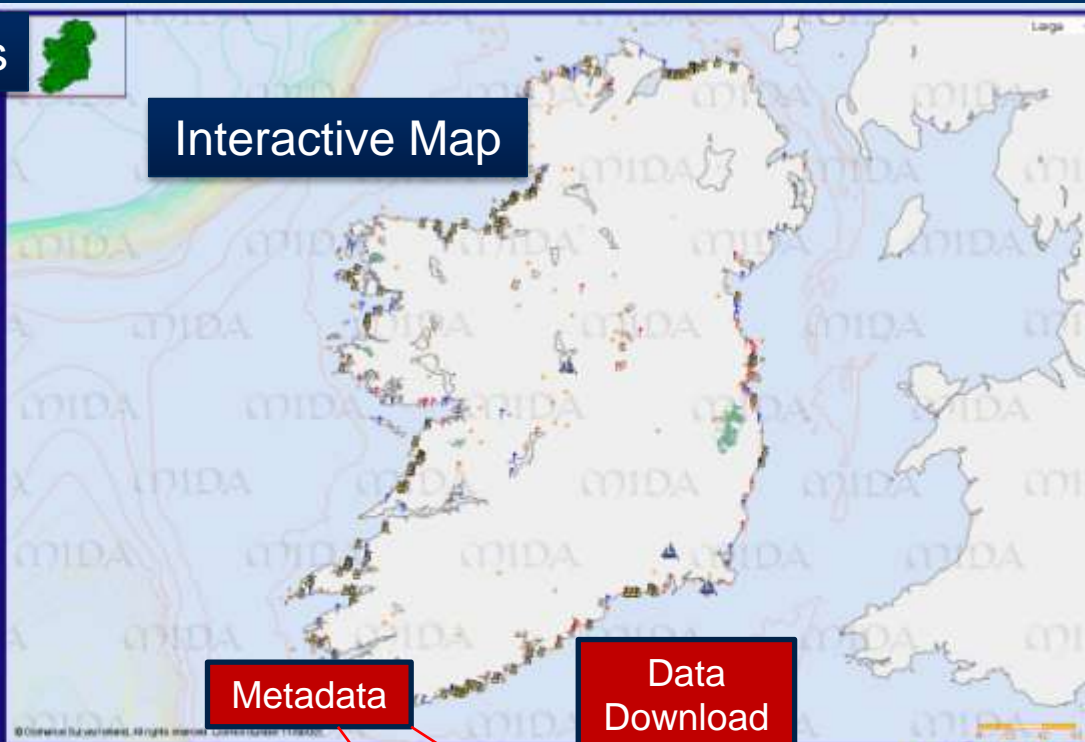
[Advanced Search](#) [Help](#)

Interactive Map Elements

Data Layers



Interactive Map



Metadata

Data Download

Tools

Information Box

The MIDA InfoPort - overview text and images

The screenshot shows the MIDA website interface. At the top, there is a navigation bar with links: home, about MIDA, information, providers, news, contribute, metadata, links, and contact. Below this is a 'go to atlas' button with a compass icon. The main content area is titled 'Physical Environment of the Coast' and includes a 'Printable Version' link. The text describes the dynamic nature of the coastal environment and human influence. Below the text are four small images of coastal scenes, each with a credit: 'L. O'Dea', 'L. O'Dea', 'L. O'Dea', and 'D. Farrell'. On the left side, there is a 'MIDA InfoPort Menu' with categories: Physical Environment (Elevation & Depth, Manmade Infrastructure, Oceanography, Climate, Hydrology, Physical Geology, Landcover & Landuse, Images of Physical Environment), Management, Biological Environment, and Socio-Economic. At the bottom, a blue banner reads 'Your multimedia resource for coastal and marine data in Ireland'.

Where to next:

- Over 10 years since the MIDA concept took shape
- Data and metadata within the MIDA are up to date but the interface is outdated (not changed since 2006)
- Present look and feel of the atlas may lead users to perceive that other aspects of the atlas may be outdated as well
- Recent developments through the UNESCO International Oceanographic Council (IOC) IODE and the ODIN Africa project secured funding for creation of Smart Atlas and a MIDA facelift

Where to next with MIDA:

- Initial reaction – yes do it! ...but in communication with the CMRC teams - the funding triggered a more reflective approach
- In order to maximise MIDA's potential for current and potential future users we can not afford to look at the interface in isolation and started with asking ourselves:
 - Where do we want to be in five years?***
 - How can we achieve that?***
- Started in house consultation with the different CMRC research teams in order to achieve a common CMRC vision of the MIDA
- The subsequent update of the Atlas will incorporate the needs of our researchers, while still catering for a wide audience

The International Coastal Atlas Network (ICAN)

- ICAN started with informal meetings of coastal web atlas developers in 2006 and developed to a fully fledged network programme of the UNESCO's IOC (Intergovernmental Oceanographic Commission) / IODE (International Oceanographic Data and Information Exchange)
- ICAN aims to be a global reference for the development of coastal web atlases, which we define as:
- *"...collections of digital maps and datasets with supplementary tables, illustrations, and information that systematically illustrate the coast, oftentimes with cartographic and decision support tools, all of which are accessible via the Internet."*

O'Dea et al., 2007, Trans-Atlantic Workshop Report 1

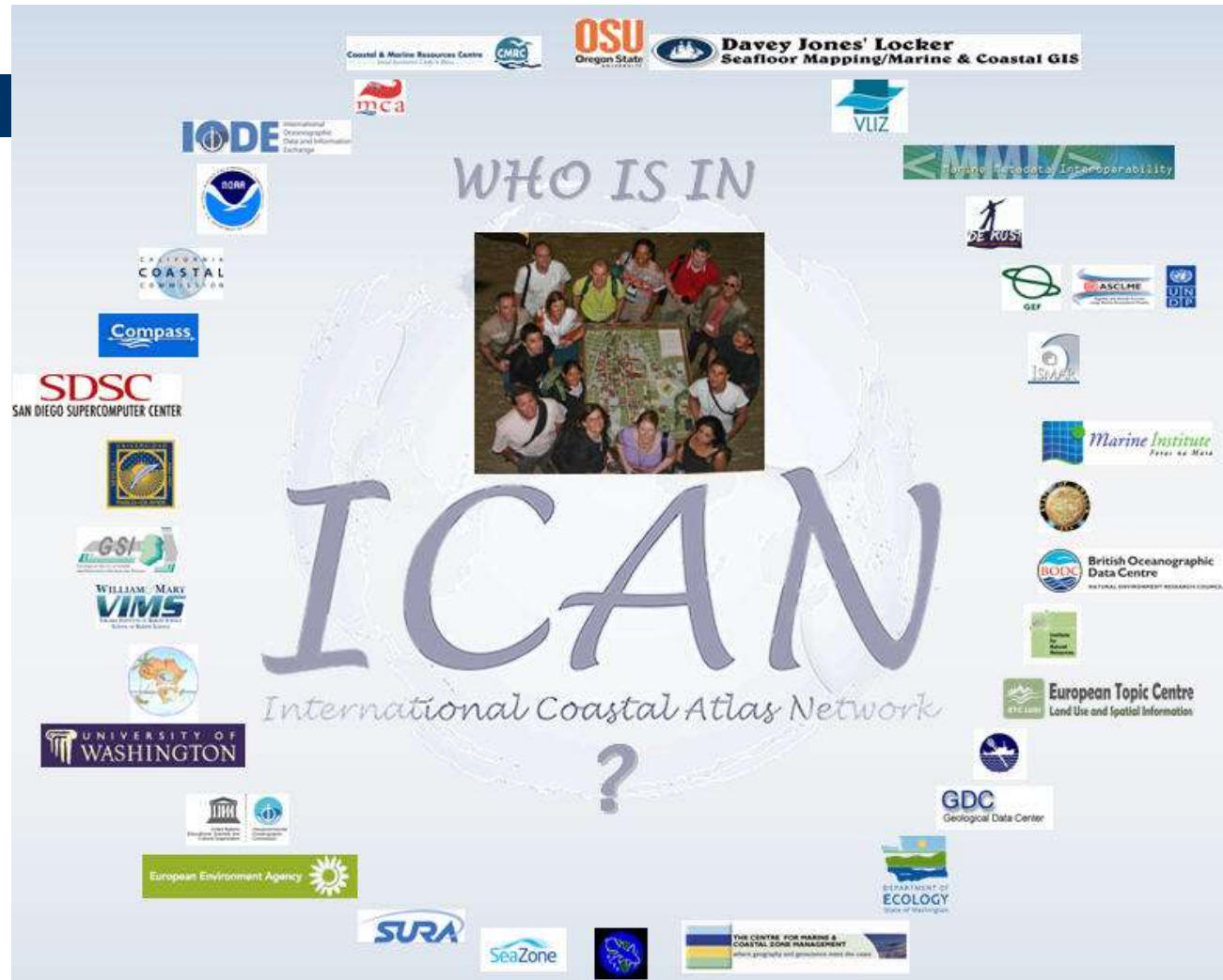
The International Coastal Atlas Network (ICAN)

- ICAN Goals:
 - ✓ Ensure network has wide representation (developers/users)
 - ✓ Develop technical & policy guidelines for atlas developers
 - ✓ Highlight benefits of interoperability & standards based systems
 - ✓ Develop collaborative projects for sharing know-how, atlas implementation and demonstration
 - ✓ Align atlas efforts to facilitate interoperability
 - ✓ Engage with other relevant projects and developments
 - ✓ Involve representatives of the user communities

The International Coastal Atlas Network (ICAN)

- There have been a number of ICAN workshops:
 - ✓ Cork, Ireland – 2006,
 - ✓ Corvallis, USA – 2007
 - ✓ Copenhagen, Denmark – 2008
 - ✓ Trieste, Italy – 2009
 - ✓ Ostend, Belgium – 2011
 - ✓ Victoria, Canada – 2013
- Next ICAN workshop is scheduled for 2015 to take place in South Africa
- Documentation of the individual meetings, presentation and ICAN work are all accessible from the ICAN website, which is currently hosted in Oregon <http://ican.science.oregonstate.edu/en/home>

ICAN representation with over 60 Members
http://ican.science.oregonstate.edu/member_dir



WHO IS IN

ICAN

International Coastal Atlas Network

?

The graphic features a central photograph of a group of people gathered around a large map. Surrounding this central image are numerous logos of member organizations and institutions, including:

- Coastal & Marine Resources Centre (CMRC)
- OSU Oregon State
- Davey Jones' Locker Seafloor Mapping/Marine & Coastal GIS
- mca
- VLIZ
- IODE International Oceanographic Data and Information Exchange
- NOAA
- California Coastal Commission
- Compass
- SDSC SAN DIEGO SUPERCOMPUTER CENTER
- GSI
- WILLIAM MARY VIMS
- UNIVERSITY OF WASHINGTON
- European Environment Agency
- SURA
- SeaZone
- THE CENTRE FOR MARINE & COASTAL ZONE MANAGEMENT
- GEOMAR
- DE RUST
- GEF
- ASCLM
- UNEP
- ISRAEL
- Marine Institute Peter de Mará
- BOIC British Oceanographic Data Centre
- European Topic Centre Land Use and Spatial Information
- GDC Geological Data Center
- STATEMENT OF ECOLOGY State of Washington

Recent Achievements

- Version 3 Interoperability prototype – the ICAN tech team is addressing interoperability with current focus on Metadata



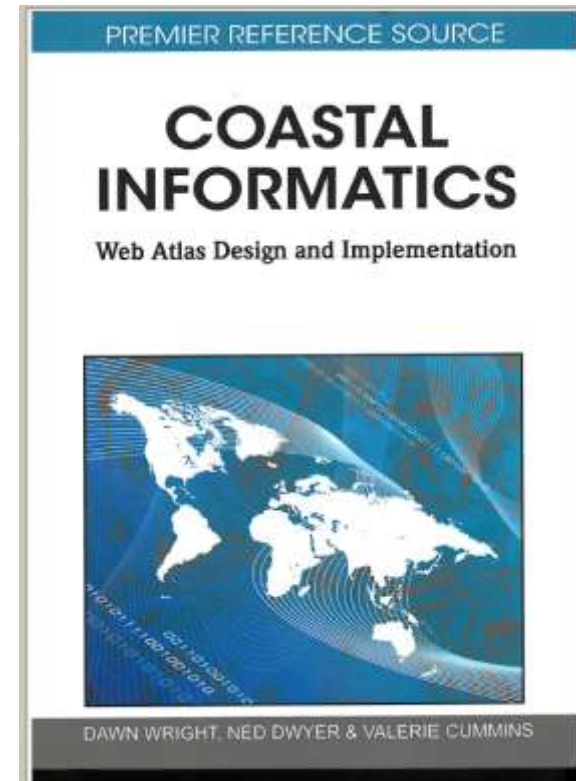
Global atlas

Local atlases



Recent Achievements

- Publications, work documentation and tech team products available on the ICAN website (the resource directory)
- Regular Newsletters (available on website)
- The ICAN handbook:
<http://ican.science.oregonstate.edu/handbook>
 - ✓ Principles of atlas design
 - ✓ Case Studies around the world
 - ✓ CWA Management and Governance



Recent Achievements

ICAN participating in training events:

- US e.g. West Coast Coastal Atlas workshop and Great lakes Workshop 2010
- Ocean Data and Information Networks
 - African Marine Atlas Workshop
 - Caribbean Marine Atlas workshops
 - SPINCAM – Southeast Pacific



Recent Achievements

- Since March 2013 ICAN is an official Project of the International Oceanographic Data & Information Exchange (IODE) programme of UNESCO's Intergovernmental Oceanographic Commission (IOC), which put governance of the Network on a sound footing
- Numerous related activities e.g. closer links to IODE Training and the Ocean teacher programme, Building Synergies with other IOC projects as well as adjusting our governance and outreach (e.g. ICAN website will be moved to the IOC IODE server)

Other initiatives of relevance to this workshop with an ICAN - link

- OBIS – the Ocean Biogeographic Information System - <http://www.iobis.org/> - is another IODE programme, that allows users to search marine species datasets from all of the world's oceans
- Marine Regions - <http://www.marineregions.org/> - managed by the Flanders Marine Institute and provides a standard list of marine georeferenced place names and areas, including downloadable shapefiles, Web Map Service (WMS), Web Feature Service (WFS) as well as static maps
- GEO - Coastal Zone Community of Practice - <http://www.czcp.org/> supports the Group on Earth Observations (GEO) and they are in the process of making a number of products available derived from Earth observations on global and regional levels - some of these products will be down to near-real time.



Thank you

- **MIDA - <http://mida.ucc.ie>**
- **ICAN - <http://ican.science.oregonstate.edu/en/home>**

*Kathrin Kopke
Coastal & Marine Research Centre,
University College Cork, Ireland
k.kopke@ucc.ie*