Web-GIS usage and users–Case studies from Ireland

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Overview

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  - Facilitation of different user groups
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• LIMES
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The Marine Irish Digital Atlas
(http://mida.ucc.ie/)

• Vision: MIDA should become a key on-line resource for all who are interested in coastal and marine information and data for Ireland

• MIDA is a single source where people interested in coastal and marine information can visualise and identify pertinent geospatial datasets and determine where to acquire them.
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Facilitation of different user groups

- Target Audience: Government Agencies, Local Authorities, Commercial, Education/Research, Tourism, NGO, Public
- Example student
Facilitation of different user groups

Natural Coastal Features

Saltmarshes

Saltmarshes are flat, poorly drained areas of land in intertidal regions subject to periodic flooding by tides. They are typically found between the upper limits of the neap and spring tides in protected bays, estuaries, and other sections of sheltered low energy coastal environments with medium to large tidal ranges (>3m) where sediment becomes deposited on intertidal mudflats under slack water conditions. Salt marshes may also develop on coastal peat deposits. These are mainly confined to the west coast of Ireland and often occur in areas where blanket bog has been encroached by the sea as a result of rising sea levels over long periods of time, frequently combined with the more recent cutting of peat.

Usually the upper parts of the marsh are more elevated so they are only totally inundated at the highest tides. The lower zones are inundated more frequently, especially where...
Facilitation of different user groups

Natural Coastal Features

The following are suggested sources for geospatial data related to the topic:

MIDA: For saltmarsh and lagoon distribution.
Facilitation of different user groups

Saltmarshes

Over half the saltmarshes in Ireland are on mudflats such as this one on the North Bull island in Dublin.

Saltmarshes occur all along the Irish coast; however in some areas, for example in Wicklow and parts of Mayo, saltmarshes are few in number, thus reflecting the essentially exposed nature of the coastline in those areas. >> More Information
Facilitation of different user groups

Professional

Search Atlas for Particular Data Layers

Select topic to search:

Choose one or more themes:
- Physical Features
- Protected Areas
- Tourism/Recreation

Advanced Search

Help
Facilitation of different user groups

Professional

National Parks

National Parks are of scientific importance and often contain very spectacular scenery. The parks are maintained by Ireland’s Department of Arts, Heritage, Gaeltacht, and the islands. In N. Ireland there is discussion on designating its first national park in the Mourne area. **More Information**

Nature Reserves (Rep. Ireland)

Nature reserves are protected areas which are important for the conservation of flora, fauna and various natural features. The network of reserves protects important and unique areas such as woodlands, bogs, grasslands, sand dune systems, bird sanctuaries, coastal heathlands, and marine areas. **More Information**

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Natural Heritage Areas (NHAs)
Facilitation of different user groups

Professional
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Kilcreny National Park is one of the most popular holiday destinations in the country.

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Nature Reserves (Rep. Ireland)

At Loch Hyne in Co. Cork, raptors are created in the narrow channel leading to the sea when tidal levels inside and outside the lough are different.

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Natural Heritage Areas (NHAs)

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Natural Heritage Areas (NHAs)
Facilitation of different user groups
Publicity and user feedback

• Workshops: consultation of cross-section of end-users throughout the MIDA design and development phase
• Because the potential end-user input can ensured that the Atlas would meet user needs e.g. participants expressed interest in spatial data for specific additional themes; to date; over 85% of those themes suggested contain spatial information
• Face-to-face meetings more effective than anonymous web-based surveys as a means of gathering feedback
• Initial promotion at specialist conferences and in journal articles in development phase
• Atlas brochure was published and disseminated widely
• official launch during the Coastal Mapping and Informatics Trans-Atlantic Workshop held in Cork in July 2006 (first ICAN meeting) - generated significant media interest

• Publicity is the lifeline of any CWA - raising awareness and attract new users - Overall the ICAN Workshops and the Network’s outreach work – promote MIDA

• Analysis of the Atlas usage statistics has highlighted the most popular aspects of the Atlas and is informing ongoing development work.
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MIDA users and uses

- MIDA user statistics: most visitors are from the Republic of Ireland, followed by visitors from the UK and the USA.
- High UK interest was expected as the MIDA was a cross border collaboration featuring island-wide datasets as well as some specific Northern Irish data layers.
- 2008 MIDA statistics showed the most popular directly downloadable datasets were from the socio-economic activity section, specifically water-based recreation.
- Keen interest in spatial data regarding water based recreation indicate that this type of information was not readily available elsewhere supporting the decision of the MIDA team to create such layers in-house.
- The ‘MIDA Engine’ or core software elements of the MIDA has been utilised in other national and international initiatives requiring web GIS portals - added value of the project - demonstrating technical skills within the CMRC and leading to additional project work.
MIDA users and uses

- The MIDA is used in teaching on a number of courses organised by the department of Geography within UCC.
- Technology and web GIS aspects are presented in GIS related courses.
- Students use the Atlas as a resource for their research in coastal management related courses.
- CMRC facilitates work experience for trainees through the Atlas - developing skills in web mapping and GIS and data and metadata management. To date nine trainees from five different countries have joined the MIDA team on placements that last from three to twelve months.
- Local students and secondary school transition year students on shorter term placements with the CMRC have also worked on the MIDA. Feedback given by the students indicates that MIDA is utilised as a tool by teachers in some secondary schools.
Challenges

• Funding - CMRC has assured the MIDA’s future by dedicating resources to maintain the Atlas.
• Advances in the display of spatial data in environments such as Google Earth and Google Maps raise expectations of web GIS users concerning the look and feel of such applications.
• MIDA team now needs to address not only maintenance but also tasks to develop a new technology interface as well as a data management system.
• Sustained promotion and publicity is the lifeline of any Coastal Web Atlas (CWA) in order to raise awareness and attract new users. Active participation in initiatives such as ICAN provides constant exposure for the Atlas and a stimulus to undertake additional development work to advance the display as well as keeping spatial and additional information within MIDA up to date.
Challenges
LIMES - European Commission Funded
~25M€, 50 pan-European partners, Period:
Dec 2006 – June 2010

Exploitation of any
new/emerging technologies
(new civil satellites, Sat-AIS,
GPS tracking…..)

Addressing European
Maritime Security
• End user group is very specialised including the Navy, Customs, Coastguard
• They are operational users, who need information at a certain time and certain reliability
• the current interface is a prototype that should make the user groups work easier
• current work is conducted with AIS - Automatic ID System (yachts - certain length and commercial boats) and VMS – Vessel Monitoring System (fishing vessels) both based on GPS
• Project tries to address information gabs for vessels that have their systems switched off using satellite data to identify suspect vessels e.g. drug trafficking or fishing in protected areas
LIMES idea

1. SAR Ships
2. SAR + AIS
3. Correlation SAR - AIS
4. Uncorrelated ships

SAR - AIS correlation
LIMES user group and demonstration interface idea
Challenges

• Overload of information not necessarily easy to use and operate with
• Integration of data: Time lag satellite data, AIS and VMS data
• Need information in near real time – Satellite data delayed
• Poor design of Interface
• Data integration into existing Interface opportunity and challenge

• LIMES partners would like to hear any feedback how to address any of these challenges from ICAN experts