



INFOMAR EU Projects and Added Value

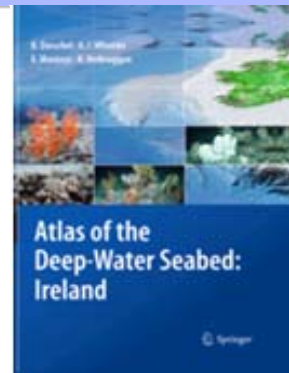
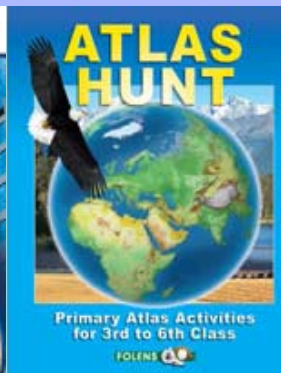
Tommy Furey
INFOMAR Co-project manager
Marine Institute

On behalf of the INFOMAR Project Team





- Value Added Programme – Look back
- Value Added Approach & Strategy Alignment
- What have we been doing / where to next?
 - EU Projects / Research Call / Strategic Projects
- What can you do to help?
- Focus - strategy, products, integration





INFOMAR

Integrated Mapping for the
Sustainable Development
of Ireland's Marine Resource

Value Added Exploitation Programme

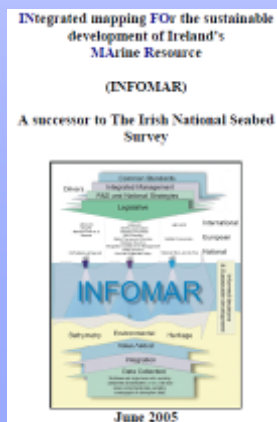
INFOMAR programmes (as defined in 2005);

1. Data acquisition, data management and interpretation
2. Data Exchange and Integration
3. Value Added Exploitation

Objective: *“To deliver a range of valued added opportunities linked to user demands, commercial markets and external funding sources”.*

Including:

- Advanced **decision support tools** and solutions driven by either policy or commercial requirements
- A programme of national and international **value added research** to leverage the skills, expertise, and data from the INSS and INFOMAR





Our Approach to achieve Value Added Delivery:

- **Phase 1 (Intangible)** – Provision of **data, products, infrastructure** and **services** to meet public and private sector needs, underpin EC and International obligations, stimulate R&D
 - integrated approach = reduced cost**
 - single survey = multiple clients** (different needs)
- **Phase 2 (Tangible)** – Promotion of strategically aligned **projects** aimed at development and delivery of **commercially viable products, tools, and services**, through interdisciplinary cross sector partnerships

2008 – 2009

Open Research Call

2009 – 2010

Thematic Research Call

2011 – 2013

Focused Project Call

Direction: Dynamic, but **strategically aligned** with EC & National Priorities (e.g. MSFD / SMARTOCEAN / Energy White Paper)

Ireland Inclusive Team Effort Required



Habitats Directive, WFD, EU Maritime Policy Blue Book (2007)

Sea Change (2007) -

Sea Change – Marine Knowledge, Research and Innovation Strategy 2007-2013

Seabed and Resource Mapping –

a critical Marine R&D Infrastructure Programme requirement to underpin
Industry, Discovery and Policy Support Research Measures

Objectives for 2013

1. **Provide baseline data** - evaluation / management of marine resources in
2. Undertake an **evaluation of priority resources** and **protected habitats**
3. **Be internationally recognised as a strong research performer in the areas of marine survey, habitat mapping, and resource evaluation,**

Marine Strategy Framework Directive (2008) – *Status Report 2012*

- | | |
|--|-----------------------------------|
| 1. Biological drivers | 7. Hydrographic conditions |
| 2. Non-indigenous species | 8. Contaminants |
| 3. Fish Stocks | 9. Seafood contaminants |
| 4. Food Webs | 10. Marine Litter |
| 5. Eutrophication | 11. Energy (inc. noise) |
| 6. Sea-floor integrity and benthic ecosystems | |



- **Research Funding / Coordination (>30 direct projects)**
 - Post Docs, PhD's, MSc's, Research Projects
 - Active engagement with UCC, UCD, DCU, NUIG, NUIM, UL, GMIT, UU
- **Research Partners - >€1.75m ('09-'12)**
 - INTERREG / FP7 / EC Contracts / SSTI
- **Steering Committees**
 - E.g. MSFDWG, STRATAGIAG, ICESWGHM, SEAWG
- **Advisory Role**
 - Public / Private / Research / National & International
- **3rd Level Training**
 - National Research Shiptime TP / EuroFleets / Bursary Scheme / Research Placements
- **Infrastructure & Data Access**
- **Facilitator for leveraging investment & research**
(Strategically & product focused)



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PHASE 2 – Value Added EU Projects

Revenue > €1.75m non exchequer funding + staff

Adding Value through Data Acquisition & Dissemination

Carbon Capture Storage Initiatives under development –CO2 storage reservoirs

<i>INIS Hydro</i>	INTERREG IVA Hydrographic Survey	Future
<i>MESH Atlantic</i>	INTERREG IVB Habitat Mapping Project	Current
<i>ATLANTERRA</i>	INTERREG IVB Geopark / Heritage	
<i>EMODNET</i>	EU Marine & Observation Data Network	
<i>Geo-Seas</i>	FP7 eINFRASTRUCTURE	Current
JIBS	INTERREG III Hydrographic Survey	Historic
MESH	INTERREG III Habitat Mapping Project	
IMAGIN	INTERREG III Aggregate Mapping	



Integrated EU Data Delivery / Strategy Aligned / Revenue & Staff

Non EU



EU Marine Observation Data Network

DG Mare/ Marine Directorate:

Commenced: 2009-2012

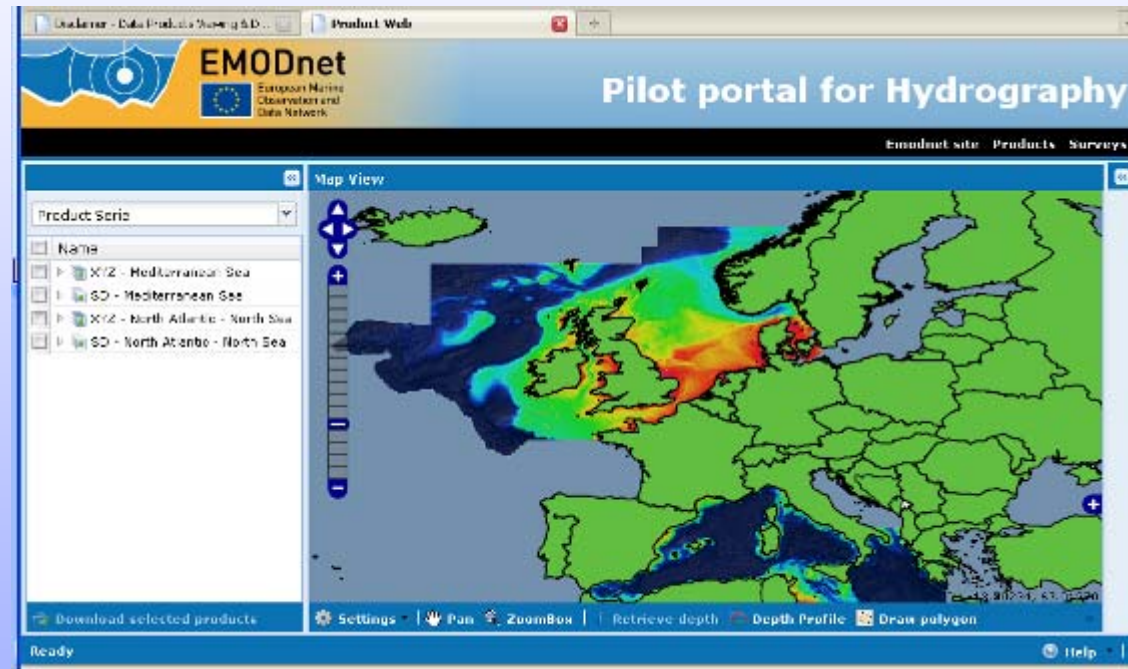
Total Value: €4.5 Million

5: Modules

**Geology, Hydrography,
Biology, Chemistry, Habitat
Mapping**

**Providing continuous large
scale data sets via web portals**

Including 500m DTM & 1:1 Million
Seabed Geology



**EU Maritime Policy Blue Book committed to promoting a European
Marine Observation Data Network**



Multiple Partners: Inc. GSI & MI

<http://www.emodnet-hydrography.eu>

Linking 26 marine geological and geophysical data centres, located in 17 European maritime countries

FP7 eInfrastructure:

Commenced: 2009-2013

Total Value: €5.9 Million

**Marine Data Exchange /
Product Development/**

**Single Portal Pan EU
Access to harmonised
marine Geo datasets and
products**

Partners: Inc. GSI & UCC



The screenshot shows the Geo-Seas website homepage. At the top, there is a navigation menu with links: Overview | Metadata | Data access | Products | Standards & Software | Meetings | Promotion | Partners. Below the menu is a large banner image of a rocky coastline with the text "Pan-European infrastructure for management of marine and ocean GEOLOGICAL AND GEOPHYSICAL DATA" and the European Union flag. The main content area is titled "Home" and "Welcome to Geo-Seas". The text below reads: "Geo-Seas is implementing an e-infrastructure of 26 marine geological and geophysical data centres, located in 17 European maritime countries. Users are enabled to identify, locate and access pan-European, harmonised and federated marine geological and geophysical datasets and derived data products held by the data centres through a single common data portal." Below this text is a row of five small images: a boat, a lighthouse, a ship's mast, a person on a boat, and a geological map. On the left side, there is a "Tools" section with links for Contact, Extranet, Sitemap, and Home. On the right side, there is a "News" section with several news items, including "Geo-Seas Training Workshop took place on 22nd - 25th June 2010", "Next Steering Committee meeting on 7th October 2010", and "Successful first year review".

<http://www.geo-seas.eu/>



Linking Mining Heritage networks

INTERREG IVB:

Commenced: 2010-2012

Total Value: €2.5 Million

Extending Copper Coast
Geopark into offshore via
INFOMAR Mapping (3D data,
shipping heritage inc. wrecks)

First such UNESCO supported
Global Geopark to do this!



The screenshot shows the Green Mines website interface. At the top, there is a navigation menu with items: Green Mines, News, Actions, Événements, Communication, Espace partenaires, and Liens. A main banner image shows the interior of a mine with wooden pillars, captioned "Mines de la Brutz" with a "Voir la fiche" link. Below this is a section titled "Le Projet Green Mines" featuring a map of Europe and a text block with Latin placeholder text. To the right, there are sections for "Actualités" (News) with dates and titles, "Événements" (Events), "Fonds documentaire" (Documentary Fund), and "Forums". At the bottom, there are logos for the European Union and INTERREG IVB, and social media links for Twitter and Facebook.

Partners: 9 partners in all 5 countries of Atlantic region. Inc. GSI & Copper Coast, Castlecomer Discovery centre



Mapping Atlantic Area Seabed Habitats For Better Marine Management

INTERREG IVB Programme:

Atlantic Area (MF 35%)

Project Commenced: May 2010

Value: €3.5 Million

10 Partners:

IFREMER, DIREN Bretagne, IMA (FR), MI (IRE), IEO, AZTI (ESP), IPIMAR, ICN, University Aveiro, Algarve (PT)

Objective:

- **Harmonise shelf and coastal habitat mapping within the Atlantic Area, for management and spatial planning**



Structural Funds 2007 - 2013: Transnational Cooperation Atlantic Coast

EU27 Cooperation areas
 Other cooperation areas

0 500 Km



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INIS Hydro

PHASE 2 – Value Added EU Projects

Ireland, Northern Ireland and Scotland **HYDRO**graphic Survey

INTERREG IVA Programme:

**Northern Ireland, the Border Region of
Ireland and Western Scotland** (MF 35% / 100% For
ROI)

Application Submitted: July 2009

Value: £3.2 Million

Notified: EOY

Delivery of new survey specification & data

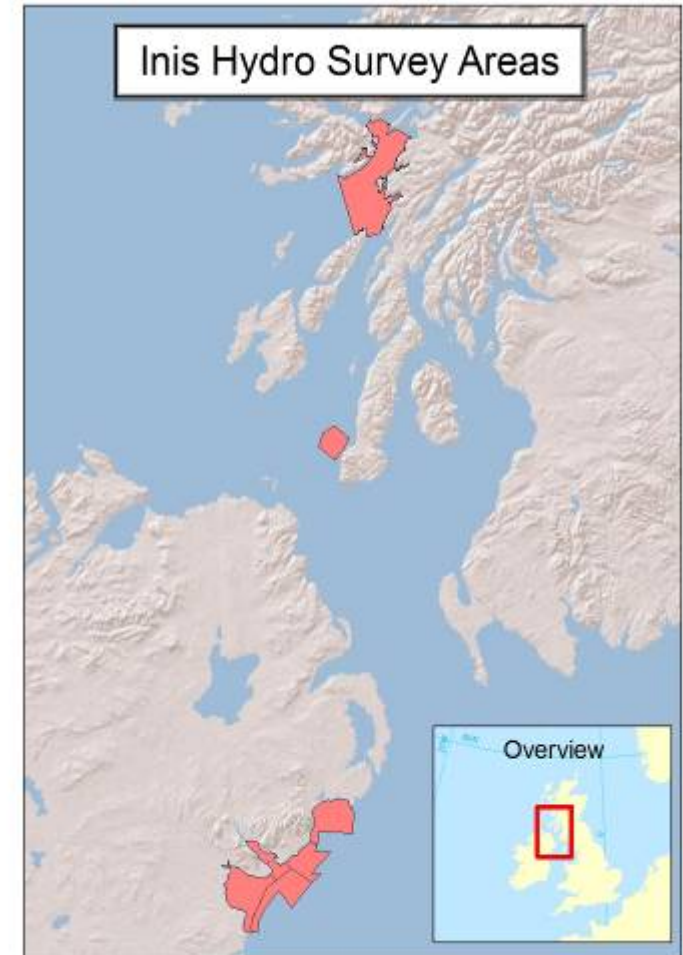
Partners:

MCA, UKHO (UK), MI, GSI (IRE)

Agri-Food and Biosciences Institute (NI)

Northern Lighthouse Board (SCO)

Scottish Assoc. Marine Science (SCO)





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Phase 2 - INFOMAR Research Call

> €20k Direct Investment in Value Added Research

2006-'07	Coral Atlas (UCC) / Benthic Mapping BSA (GMIT) / Hydroacoustic Data as a tool in Ocean Management (UL) / Irish Sea Gas Pockmarks (GSI) / Geochemical analysis of seabed samples (DCU) / Updating the Glacial map of Ireland (UU) / LiDAR classification software development (QT)	
2008	Open Research Call	13 Applications / 9 Awards
2009	Applied Research Call	29 Applications / 14 Awards
2011 Q1	<p>Focused Value Added Project Calls (tbc) – Coordinators for:</p> <ol style="list-style-type: none"> 1. Ocean Energy & Environment 2. Aquaculture & Fisheries 3. Shipping & Marine Leisure <ul style="list-style-type: none"> • Scope sector requirements from INFOMAR • Identify development, funding, & partnership opportunities (inc. SME's) • Target integrated solutions for data acquisition / analysis / delivery 	
Potential Projects	<p>Coastal Seabed Lander</p> <p>R.V. Keary LiDAR</p> <p>Mobile GPS data products</p> <p>Kelp resource mapping</p>	<p>4D data visualisation</p> <p>Marine Spatial Planning Pilot</p> <p>MBES Water Column Analysis</p> <p>MSFD Monitoring Tools</p>

Future



R.V. Keary Mounted LiDAR

- Sensors – Laser scanner, motion sensors, and digital camera
- Applications – Coastal erosion, environment, infrastructure status

Coastal Submarine Lander

- Sensors - Currents, sonar, imagery, optical backscatter, acoustics
- Applications – Environment, Aquaculture, Ocean Energy
- Deployment – 2011, Galway, Kenmare, Belmullet?

Future ↑



“commercially viable products, tools, and services”

Ocean Energy

Wind, Wave, Tide Energy Site surveys (Shannon ongoing)

SmartBay

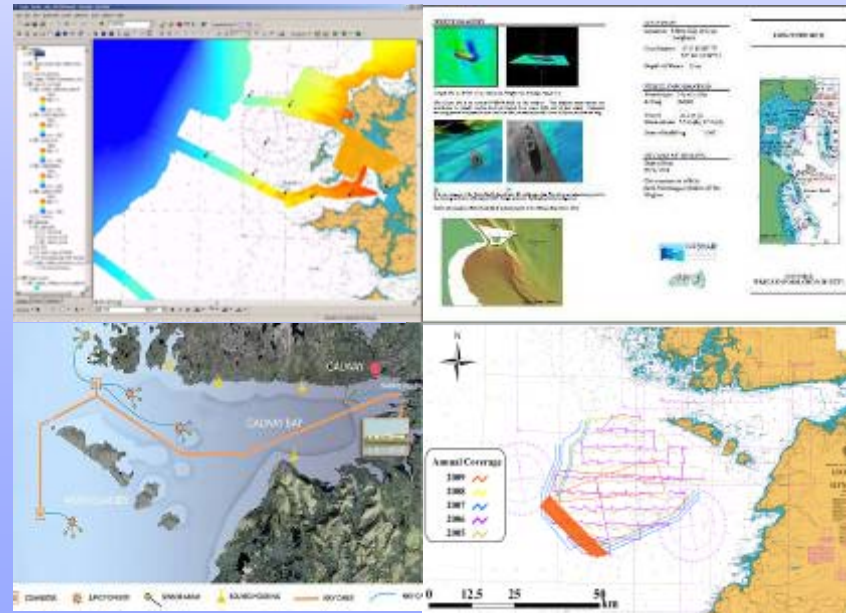
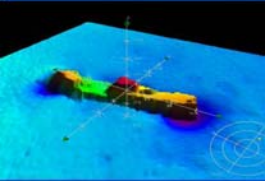
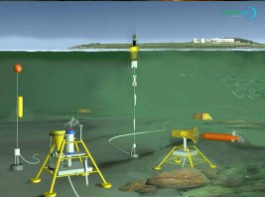
Baseline survey for marine research infrastructure of interconnected sensors and computational technology

Nephrops

Habitat mapping surveys & seabed classification software testing

Archaeology

Wreck Surveys





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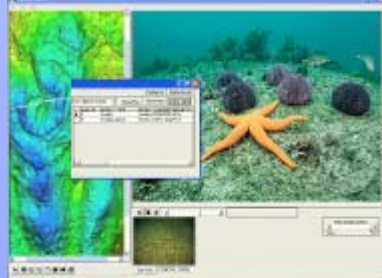
Value Added – Origins & Aspirations

IRELAND	KNOWLEDGE	SOFTWARE	HARDWARE
PAST	Temporary research post	Metadata compilation	Rovtec Smart Ping time trigger
PRESENT	Irish SME	Data analysis & processing	ROV Latis, WiFi, Sensors
FUTURE	International Consultancy, Solutions Export	4D Data Vis / feature extraction tools Coastal zone management tools Marine spatial planning tools	Integrated Monitoring Solutions

Future ↓



Biospheric Engineering



STRATAG (NUIM)



MMRRC (UL)



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What can you do for INFOMAR?

- Participate in Value Added workshops Q1 2011
 - Scoping of 2011 Value Added Programme Themes
- Provide Value Added Feedback in 2011
 - Details of **research** attributable to or supported by INFOMAR / INSS, (publications, datasets compiled, tools developed, additional funding leveraged or ship time awards (i.e. **cost benefit**)).
- Contribute to collation of Equipment Inventory
- Focus on development of tools, services & technology to augment or compete with commercially available products
- Incorporate engineering and ICT competencies in research programmes
- Increased consideration of Publicity / Outreach / Cost Benefit
- Acknowledgement



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Conclusion

Value Added Integrated Mapping

- Integrated Disciplines
- Integrated Technology
- Integrated Programmes
- Integrated Strategies
- Integrated Research
- Integrated Funding & Cost Sharing

- Feedback & Closing the loop
- Untapped Potential

