



***10th European Research Vessel Operators
(ERVO) Meeting 2009 - 14th – 15st May
Copenhagen , Denmark.***

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RV Celtic Voyager & RV Celtic Explorer

Celtic Voyager:

31.5 m length

Delivered 1997

Endurance 17 days



Celtic Explorer:

65.5 m length

Delivered 2002

Endurance 45 days

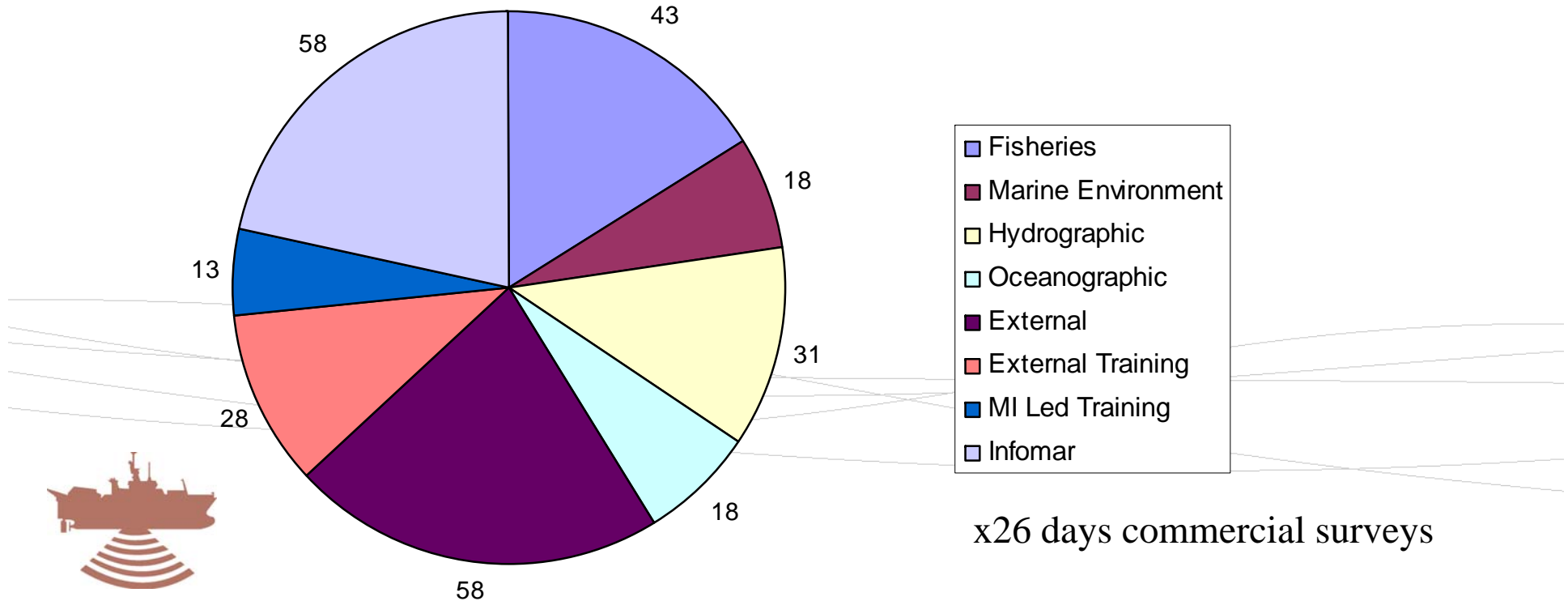




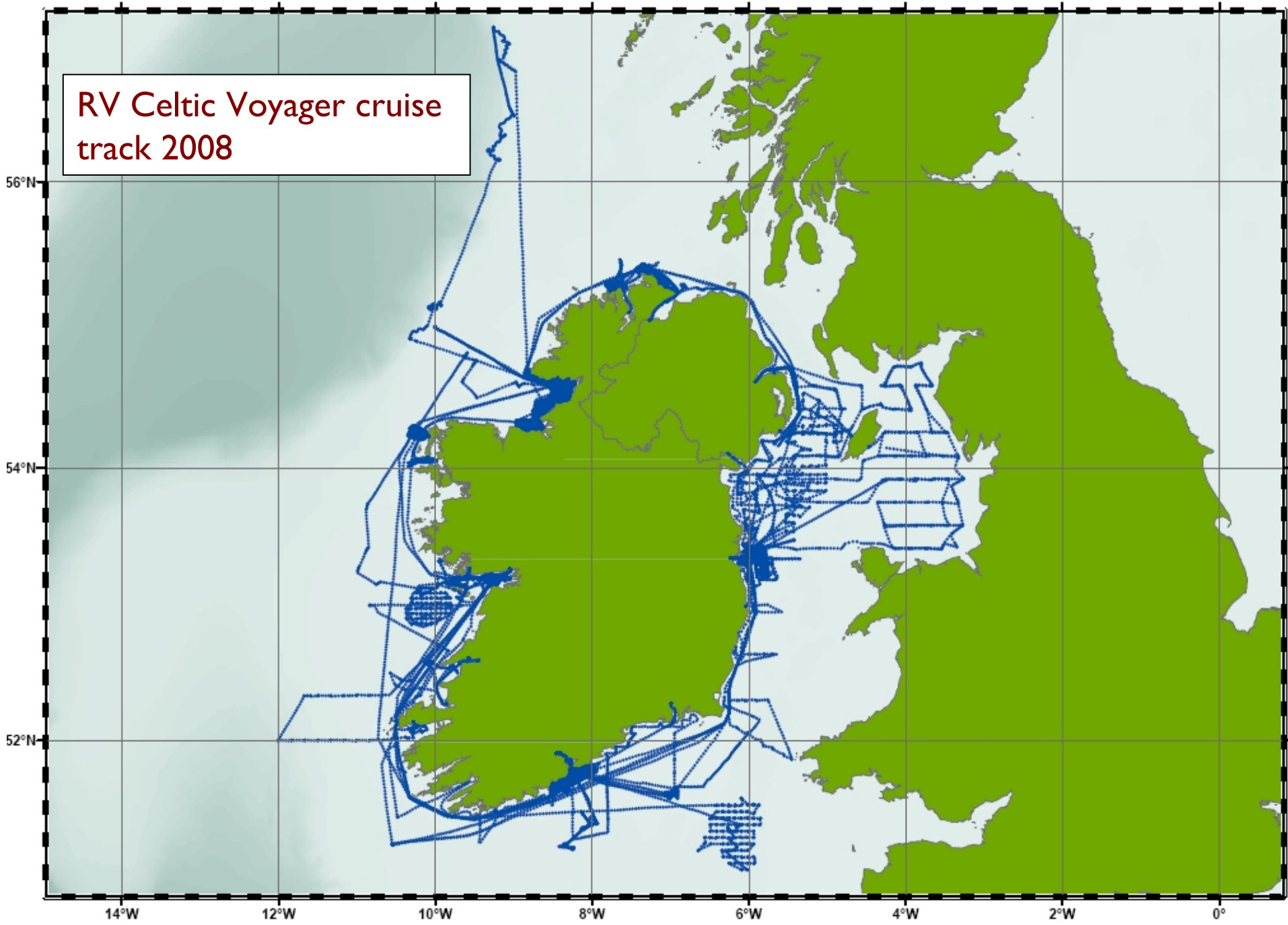
Celtic Voyager Activities 2008

Celtic Voyager Days at Sea 2008

Total: 267



RV Celtic Voyager cruise track 2008

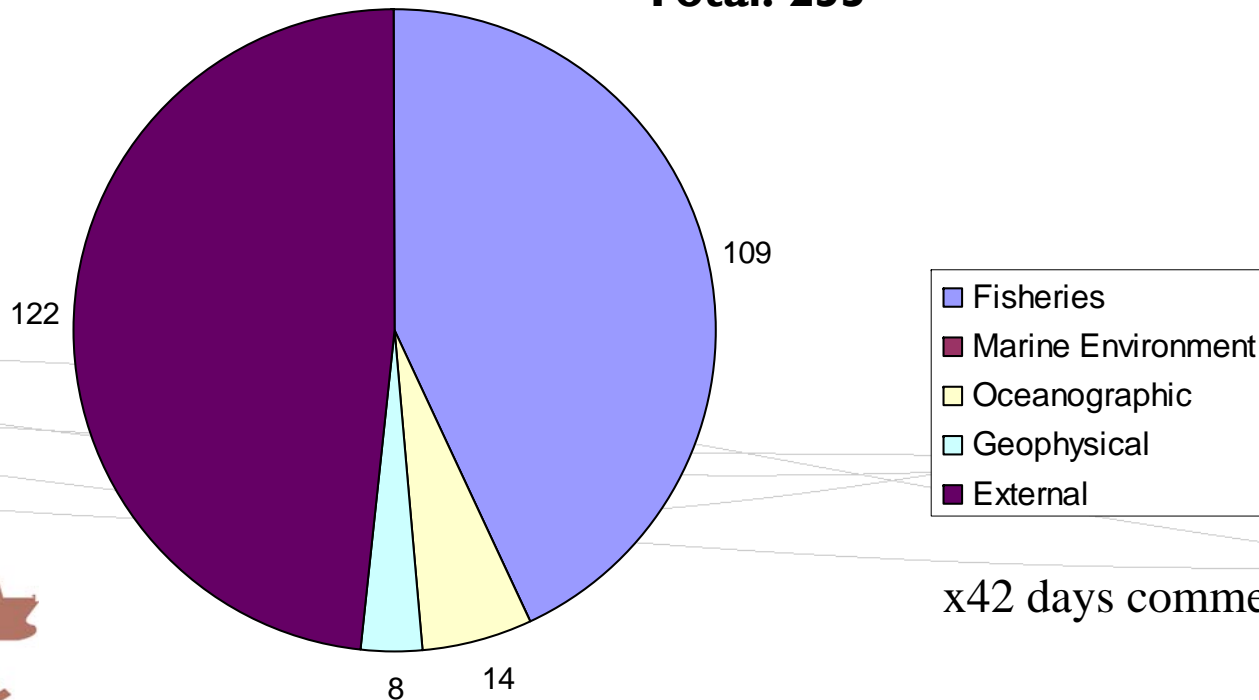




Celtic Explorer Activities 2008

Celtic Explorer Days at Sea 2008

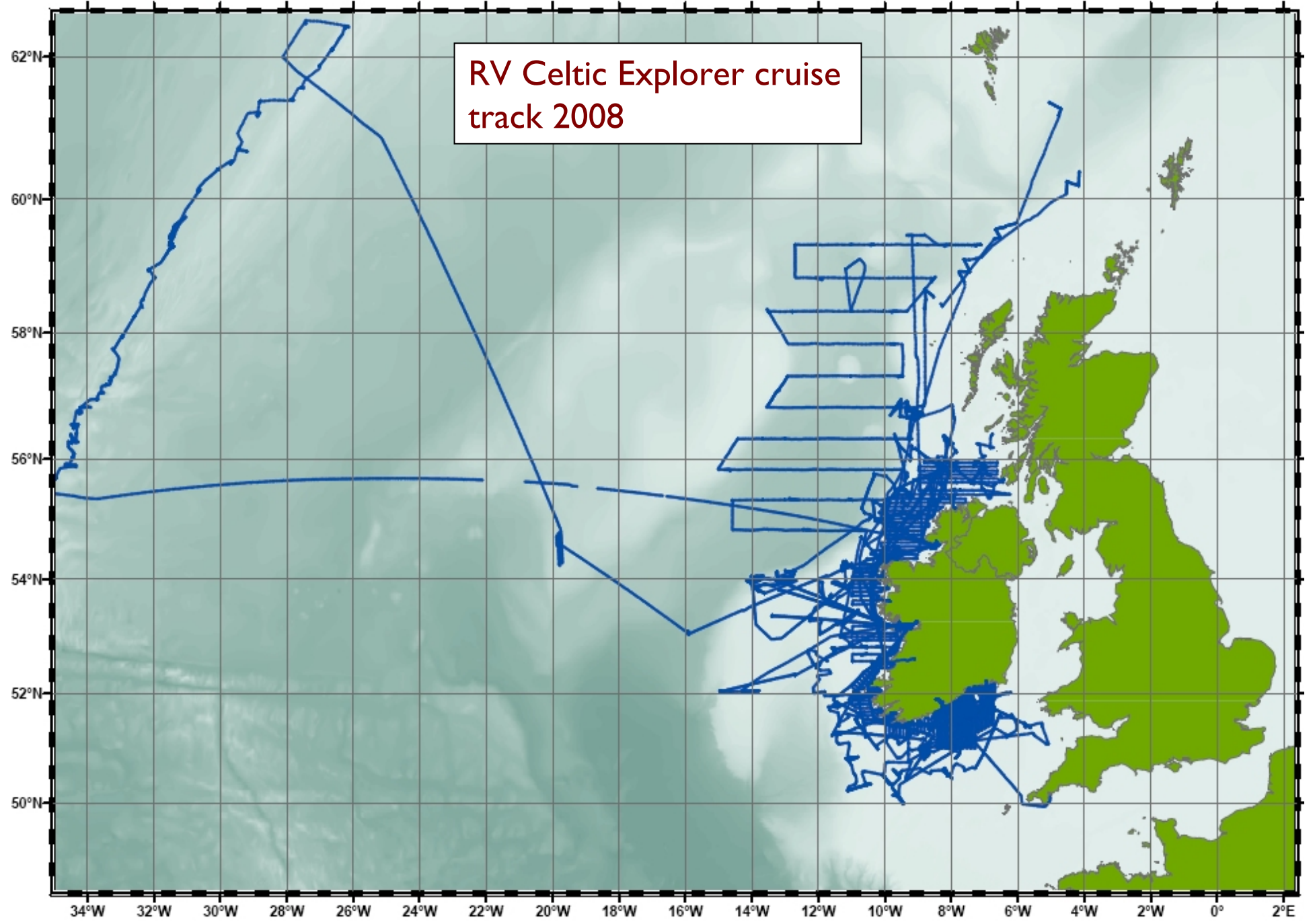
Total: 253



x42 days commercial surveys



RV Celtic Explorer cruise track 2008





Survey Highlights – Celtic Voyager

- Successful delivery of 267 scientific days
- Commercial surveys – site survey and pipeline inspection survey and 2 CEFAS surveys in the Irish sea
- Infomar 58 day survey off North west, south and east coasts
- Joint Irish Bathymetric 30 day survey off North Donegal using EM3002 shallow water multibeam
- New Fibre Optic Underwater TV system utilised for 28 days of UWTV Nephrops stock assessment survey
- Two 'Salsea' surveys on CV & CE for Salmon Smolt in Faroese waters

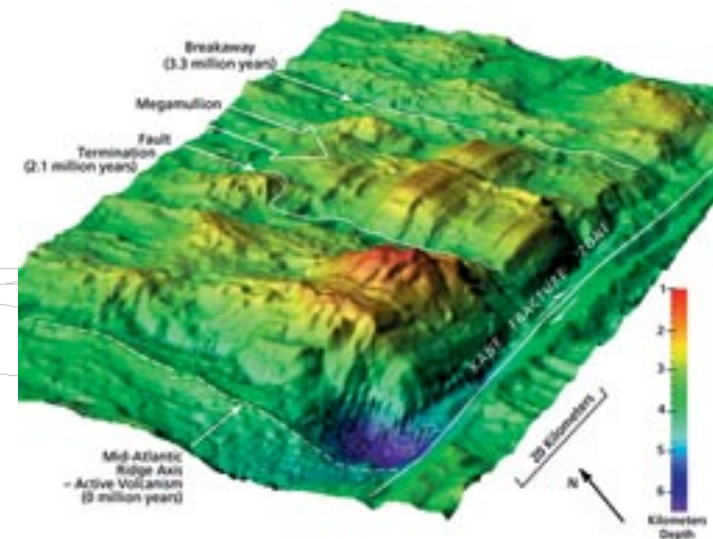




Survey Highlights – Celtic Explorer

Celtic Explorer:

- Successful delivery of schedule for CE from March to December, total of 253 scientific days completed.
- Vibrocoring, piston coring and MeBo coring surveys in deeper waters
- Extensive deepwater multibeam and dredging survey on the mid-Atlantic ridge using SeaBat 8160 on drop keel
- Site Geo Hazard Survey - 26 days in the Celtic sea
- 12 day high resolution seismic survey





Other highlights

- Successful delivery of turnkey commercial surveys on both vessels
- *5 year refit in A+P Falmouth completed by end of Feb '08*
- Celtic Explorer unanticipated engine issues resolved during refit
- Vessel Modifications to accommodate deepwater ROV completed





“Holland I” ROV

- SMD Quasar, 3000m operating depth
100hp, Hydraulic work class ROV with
TMS
- Self contained portable launch and
recovery system, workshop and
control containers
- 7 function and 5 function
manipulators
- Fitted with conventional cameras ,
HDTV system and HMI Lighting





ROV program 2009

- Field Operational acceptance tests completed in January and April 2009
- 54 science days and 3 ROV surveys planned for 2009
- Deepwater trial to 2970m completed!
- Integration of Reson Multibeam system and INS system planned
- Construction of Survey Skid for multiple uses underway





Technical & Operational Support Services

- P&O Maritime services completed a third year of providing of ship management, operation and maintenance services for the national research fleet.
- The contract has been extended by a further 18 months until September 2010.





Celtic Explorer 5 Year Refit

- The vessel entered dry dock in A+P Falmouth in late December 2007 to begin its obligatory 5 year refit which was completed by the end of February 2008 . This lay up period resulted in the lower then normal number of days at sea completed. The refit of the vessel saw several modifications, repairs and renewal of equipment on the vessel which will allow more efficient operations in future years as well as keeping the vessel in top class condition.



Celtic Explorer 5 Year Refit

- Brown water issue
- Drop keel locking device
- Service of Impressed Current Cathodic Protection system
- Relocation of piping from uninterrupted power supply (UPS)
- Paint and shot blast aft deck and touch up requirement
- Water blast and paint the drop keel
- Dynamic Positioning (DP) Upgrade
- Non-toxic anti fouling hull modification
- Ti20 temperature probe relocation
- Hydraulic system service and winch overhaul Additional container fittings



Integrated Marine Exploration Programme

- Over 300 days of seagoing field-team support for Integrated Research surveys, Dedicated Training programmes, MI activities and IMEP led training courses annually.

“To further develop and augment national capacity in multidisciplinary marine research across the island of Ireland”



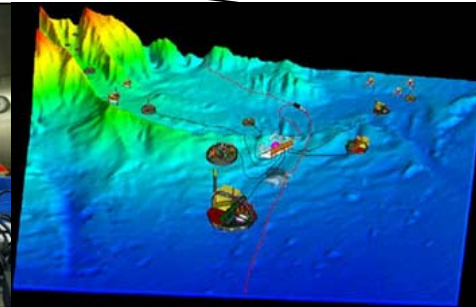
Infrastructure



Training



Research



Innovation



NDP and SSTI Ship time Grant Aid: 2006 to 2009

Year	Activity	Funding	No of Surveys	No of Scientists/ Students	Vessel Days
2009	Research	€1,594K	10	124	100
	Training	€450K	12	151	52
	Total	€1,999	22	275	152
2008	Research	€980	6	67	70
	Training	€417	11	131	42
	Total	€1,397	17	198	122
2007	Research	€480	5	57	45
	Training	€239	6	101	21
	Total	€719	11	158	66
2006	Research	€302k	4	50	44
	Training (MI funded)	€47k	7	105	12
	Total	€349k	11	155	57



IMEP-Led Training: 2008-2009

Training activity	No of Training surveys	Vessel Days	No of students	Student days
Science@Sea	10	20	120	240
Discover Science@Sea	12	6	144	72
IMEP-led training for third-level institutes	3	3	37	29
Total	25	29	301	337

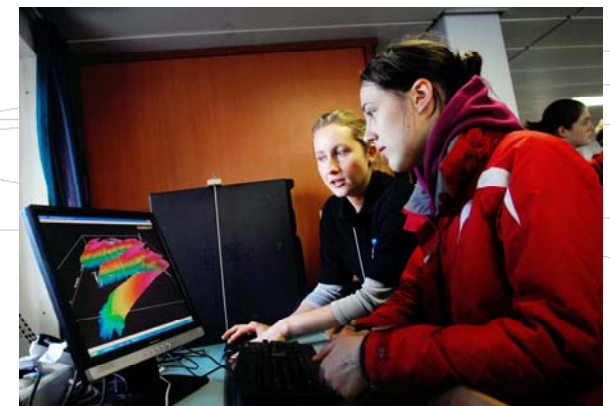


- Provision of ten two-day *Science@Sea* practical ship-based training courses for 120 third-level students between October 2008 and April 2009.
- Twelve *Discover Science@Sea* programmes for 144 TY students.
- IMEP led training for 37 MSc Marine Biology UCC, BSc Geosciences UCC and BSc. Geology UL.



Science@Sea: Ship-based Training for Third-level Students

- Multidisciplinary practical marine science ship-based training.
- Emphasis on using ecosystem approach and conducting baseline assessments.
- Oceanography, Geosciences, Benthic Ecology, and Fisheries Science.
- Training provides practical skills in sample acquisition and processing, deployment of equipment/instrumentation, data acquisition, analysis and interpretation.
- Onboard orientation includes vessel activities and capabilities, safety at sea, bridge tour, pre-survey design and planning, and post-survey analysis and assessment.





Science@Sea: Ship-based Training for Third-level Students

- Over 300 applications received from individual undergraduates and postgraduates from across Ireland.
- 8x2-day training course on CV for 96 undergraduate and 2x3 day on the CE/CV for 24 postgraduates which included 1 day PST course.
- Students receive practical skills necessary to design, implement and execute research surveys at sea.
- Internationally recognised PST (STCW95) certification available to participants (uptake of c 60 annually)
- Providing skills required for academia, industry and R&D organisations nationally and internationally.
- In line with National strategy to develop a knowledge-based economy.
- Science@Sea is now accredited, and is recognised by the *Institute of Marine Engineering, Science & Technology* (IMarEST) as contributing towards the continuous professional development of Marine Scientists.



Discover Science@Sea: Marine Science & Technology Career Options for Transition Year Students

- Twelve half-day training programmes for 144 transition year students out of Cork and Dublin.
- Received applications from across Ireland.
- Students participate in mini-research surveys and work alongside marine scientists.
- Demonstrates various career options available in marine science and technology.
- Encourages students to chose science options
- Widens the Marine Institutes profile among second level organisations with associated outreach opportunities (Cork Examiner, Sligo Champion etc.)





Challenges for 2009/10...

- ROV Program delivery, creating and developing ROV team
- Continuation of IME team support surveys + accredited modules
- Completion of benchmarking process
- Rollout of new online survey planning system
- Funding of research programs and Shiptime uncertainty
- Worsening fiscal situation providing challenging background
- Future direction of fuel price.....
- Keeping vessel schedules full..





Thank You!

