11th European Research Vessel Operators Meeting 2009

14th – 15th May 2009, Copenhagen

The 11th **ERVO Meeting (ERVO 2009)** was held at the Technical University of Denmark (DTU Aqua) Copenhagen, Denmark on **14th – 15th May 2009.**

In total 14 countries were represented at the meeting (please see a table of participants at the end of these minutes).

13th May,
The group met at the Denmark Hotel the 13th for Icebreaker. On the day after, a bus carried the group to the DTU.

Day 1 14th May at Denmark Technical University (DTU Aqua)

Presentation of ERVO2009 agenda

Mr Steen Silberg presents the ERVO 2009 agenda

Agenda

Thursday 14th May

0845 – 0900 Welcome, Administrative remarks and	**S. Silberg**
Presentation to DTU	**F. Köster**
0900 – 0915 Opening of ERVO 2009,	**A. Cattrijsse**
Intro & Approval of ERVO 2008 minutes	**A. Cattrijsse**
0915 – 1030 National updates	**All**
1030 – 1050 Coffee break + photo session	
1050 – 1230 National updates	**All**
1230 – 1330 Lunch	
1330 – 1500 National updates cont'd	**All**
1500 – 1520 Code of conduct marine scientific research	**G. West**
MEPC observer status & UN MSR guide	**R. Rogers**
1520 – 1540 New Spanish regional vessel	**J. Diaz**
1540 – 1600 Coffee	
1600 – 1620 New arctic Norwegian vessel	**P. Nieuwejaar**
1620 – 1630 New German RV	**K. Von Bröckel**
1630 – 1650 Update on US fleet programs	**D. Rolland**
1650 – 1700 Video on Aurora Borealis (if time allows)	**K. Von Bröckel**
1700 – 1730 Transport back to Hotel Denmark	**All**
1815 Pick-up at Hotel Denmark to dinner	**All**
1900 Dinner at Saga Queen	**All**

Friday 15th May

0845 – 0850 Good morning and administrative remarks	**A. Cattrijsse**
0850 – 0910 Ballast & waste water treatment	**L. Meinders**
0910 – 0930 Hydraulic vs. electric winches	**V. De Angelis**

0930 – 0950 MacArtney on new winch technology	**H.J. Hansen**
0950 – 1010 Coffee	
1010 – 1030 EUROFLEETS-project: partners & activities	**P. Nieuwejaar**
1030 – 1040 Loss of lives at sea	**P. Nieuwejaar**
1040 – 1050 Engine alignment problems on Celtic Explorer	**J. Breslin**
1050 – 1100 New online survey system	**J. Breslin**
1100 – 1110 dealing with piracy, the experience of Pelagia	**M. Rietveld**
1100 – 1120 ERVO webpage	**S. Sà**
1120 – 1130 ESF Marine Board matters	**A. Carbonnière**
1130 – 1140 OFEG & OFEG Tech	**M. Rietveld**
1140 – 1150 ISOM 2008	**P. Nieuwejaar**
1150 – 1200 InMarTech 2008	**O. Quedec**
1200 – 1210 Extension EEZ	**J. J. Danobeitia**
1210 – 1220 Charter party agreements	**M. Rietveld**
1220 – 1230 Agenda for 2010 - Place & date ERVO 2010	**All**
1230 – 1330 Lunch and transport back to Hotel Danmark	**All**

Welcome and Administrative remarks
By Steen Silberg

Presentation to DTU and the Institute and Welcoming
Mr Fritz Köster, director of National Institute of Aquatic Resources (DTU Aqua), presents the Institute, projects and infrastructures and its coupling inside Denmark science facilities. Formerly Danish Institute for Fisheries Research is an institute at the Technical University of Denmark.
With a total of 330 **employees**, of which around a third is **scientific staff**, this Institute deals with the aquatic science ,including the **connection** between the production of living resources and the aquatic environments, climate as well as ecosystem structure and function ,**advising** on commercial and recreational use of living resources in fishing and in aquaculture. **Processing and improving** fish products into healthy foods. In 2008 the institute had a **budget** of about 245 mills DKK.

Opening of ERVO 2009, Introduction and Approval of ERVO 2008 minutes
By André Cattrijsse, VLIZ, Belgium

Chair person
André. Cattrijsse, VLIZ, Belgium

National Updates

United Kingdom

National Oceanographic Center
By Geraint West

- RRS Discovery Problems-
  - Main Motor
  - Winch Suite
  - Steelwork
  - 5 months in yards in total
- RRS James Cook
  - First full year of operations
- Discovery Replacement
  - To be named 'Discovery'
  - One tender received
  - £/Euro exchange rate 'challenges'
  - Project currently in limb
- Tender Clarification / Evaluation Oct – Dec 08
- Preferred Bidder Status Decision – Dec 08
- Funding Award confirmation from DIUS (LFCF) – TBC
- Contract Negotiation Plan – Dec 08 to March 09
- Gateway 3 "Investment Decision". February 09
- Project Dormant – March 09

http://www.noc.soton.ac.uk/nmf/discovery_replacement_project/d4rpintroduction.html

- UK/Germany 'Super Barter'
  - JC023 E. Pacific
  - 2008 SO198-1 & SO198-2 Sumatra
  - 2009 SO200-1 & SO200-2
- NERC Ship Management Review
  - WP1 Vessel Demand Review
  - WP2 Vessel Scheduling
  - WP3 Managing the period until Discovery replacement
  - WP4 Managing long term ship operations

France

Ifremer
Ifremer Activity report 2008
By Olivier Quedec

Resume of R/V activities Total cruises: 907 days Total activity: 996 days total commissioning: 1098 days

L'Atalante modernization: The vessel entered the shipyard in November 2008, to be redelivered in May 2009: replacement of all scientific equipment including one EM 122 and one EM 710 multibeam echo sounders, refitting the laboratories and scientific areas, mid-life maintenance (propulsion,…)

Haliotis work boat entered service in May 2008 for shallow water mapping surveys (<10m)

New towed seismic system Sisif
Penetrometer Penfeld fully operational
The new 30 m coring which is operational onboard R/V Pourquoi Pas? With a large improvement in the quality of recovery (85%)
6 new piezometers
V-SAT on board Thalassa

Spain

UTM.CSIC

Oceanographic Research Fleet: Spanish activities in 2008

By Arturo Castellón UTM.CSIC

1. **General**

The UTM-CSIC manages two own vessels, and operates another two from the Navy. They are:

R/V Sarmiento de Gamboa, LOA 70,5 m, DP Class 1, built 2007 (Approx. 240 days/y at sea)
R/V Garcia del Cid, LOA 37,0 m, built 1977 (Approx 142 days/y at sea)
R/V Hespérides, LOA 82,5 m, ICE Class 1C, built 1991 (Approx 280 days/y at sea)
R/V Las Palmas, LOA 41 m, Supplier, built 1978 (Approx 180 days/y at sea)

2 **New equipment/instrumentation acquisitions**

R/V Hespérides;

- Setting up of a new piston corer of 10 m in a joint venture between **OSU (USA) & UTM**
- Installation of a VSAT High speed Satcomm (Internet, VoIP): Operator Hisdesat. X Band

R/V Sarmiento de Gamboa;

- Acquisition of a Gravimeter Lacoste & Romberg Air- Sea II
- Installation of a VSAT High speed Satcomm (Internet, VoIP, VPN Implementation)
- Acquisition of a new Citometer sorter
- Acquisition of a PCO2 (testing)
- Acquisition of a new SeaSoar
- Acquisition of a large multichannel Seismic equipment, streamer length of 6,0 km, together with an airgun array (20 guns) totalizing a max energy of 6000 cu.

- MCS Compressors: Containerized LMF 25/138-207-E50 (MCS Digital streamer to be installed during 2009)
- Acquisition of 18 OBS across an MOU between SCRIPPS and UTM
-

R/V Garcia Del Cid;

- Acquisition of a Multibeam echosounder: *ELAC SeaBeam 1050D dual 50 kHz (3000 m) 180 kHz (600 m).*
- Acquisition Octopus F-180 Inertial positioning and Attitude sensor (pitch, roll heading, heave
- Acquisition of ADCP: Teledyne RDI OS 75 kHz

3 Cruise activity

The cruise activity in 2008/2009 has a significant activity concerning the International Polar Year (IPY), being the Hespérides one of the few vessels that researched in both Poles. Another increased activity was devoted to mapping the EEZ. These activities were completed with the normal yearly planning of the fleet.

RV Hespérides:

- *2 IPY Antarctica surveys; Oceanography (24 days) ,Seismic (47days) :*
- *5 Physical oceanography cruises. (ca. 90 days),*
- *2 EEZ cruises (ca. 22 days. Spain & Portugal), survey Atlantic for Argentina (7 days)*
- *3 geosciences cruise (excluding SMC). Ca. 40 days, Mediterranean, Atlantic*

RV Sarmiento de Gamboa:

- *ROV scenario certification. Deployment of Ifremer's Victor 6000, 5days*
- *1 Multidisciplinary cruise (Benthos, chemistry, Multibeam, coring. – 23 days)*
- *3 SAT /technical cruises (27 days,); Testing cruises during 2008 for noise measurements and acceptance of equipment, Test cruise for FacsAria (**citometer** & sorter) validation*
- *3 Physical oceanography cruises. (60 days).*

RV Garcia del Cid:

- 5 Physical oceanography cruises. (60 days).
- 6 Biological cruises (58 days).
- 3 Geosciences cruises (24 days).

4 Bartering/Rental Agreements (equipment and RV's)

Deployment of Ifremer's Victor 6000, 5days

5 Lost equipment/

- Analog Teledyne 2.5 Km. Streamer. . March 2008. Lost in South Atlantic due to severe weather conditions.

Equipment Troubles

- Found origin of beam forming problem on EM120 at faulty Titanium ice window. Manufacturer is implementing a correction algorithm and a window replacement will be done in next dry docking

- Noise suppression on BO Sarmiento de Gamboa acoustic instruments. Work in progress

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Romania

National Institute of Marine Geology and Geoecology GEOECOMAR
Romania National Update
By Dr. *Stefan Florescu*

Codes Implementation

- **R/V Mare Nigrum** in shipyard for refit for classification ISM Code and ISPS Code Certificate, GEOECOMAR – certification for scientific activities, ISO 9001. Delivery in March 2009-09-16 118 days at sea in 2008
- **R/V Istros** (Fluvial infrastructure) 190 days at sea

New Acquisitions:

- Electrical HYDROGRAPH Winch 3000 m of 12 mm cable

Activities 2009

R/V Mare Nigrum

- Testing ROV Vector M5
- Geological and geophysical research June to September 2009

R/V Istros

- National Core program Geo-ecological research on sediments.

Portugal

COI / MCTES
Portugal National Update
By Dr. *Luis Menezes Pinheiro*

NRP (*Navio da República Portuguesa*) *D. Carlos I*
2008/2009

- New **MCS** seismic system
- New **ROV *LUSO* (EMEPC) 6000 m (2008)**
- New **TV-GRAB**
- New **Piston Core**

NRP *Alm. Gago Coutinho* (1989)

- Dynamic Positioning installed

Other ships

NRP ANDRÓMEDA *(1980)*
NRP *AURIGA*
R/V ARQUIPÉLAGO (DOP) (1994)
R/V NORUEGA (IPIMAR) (1978)

Other equipment

AUV *INFANTE* (DSOR) (2002)
ASV *DELFIM* (DSOR) (1999)
AUV *ISR* U. Porto (2005)
AUV *Isurus* U. Porto (1998)

Netherland

NIOZ, Royal Netherlands Institute for Sea Research
Update 2008
By Dr. *Erica Koning*

NIOZ coastal RVs:

RV NAVICULA (24m): Wadden Sea
RV STERN (15m)
Ocean Class: RV PELAGIA (66m)

323 operational days

- 154 d National and ESF EuroCORES programs
- 40 d International (EU) programs
- 60 d barter (for NERC (22d) and BMBF (38d))
- 69 d Charter

+ 30 d maintenance
IPY cruise on RV POLARSTERN- Antarctic: 6 February to 17 April.

Barter cruise onboard FS Meteor in the Mozambique Channel, 18 January to 5 February. NIOZ team recovered and redeployed 8 moorings.

4 days barter onboard RV Discovery, mooring turn around in Irminger Sea.

Mozambique Channel

Successful recovery and redeployment of 8 mooring arrays including this sediment trap mooring despite the approach of cyclone 'FAME'
Upgraded Kongsberg EM302 Swath Multibeam system
MOVE!

2009 Plans
Development and testing of a new ultra clean CTD system with 25l bottles

Re-visit the GEOSECS transect, from Reykjavik to Montevideo

Final testing and start of a 9-months experiment with MOVE!

End of 2009: Midlife refit Pelagia Cost 3 million euros for 15 years of operation

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Italy

CNR National Council of Research

Italian Update 2008

By M. di Bitetto and G. *Magnifico*

R/V *Urania* (1992)

- 2008 20 cruises , 309 days
- 2009 18 cruises 326 days

R/V *Dallaporta (2001)*

- 2008 28 cruises, 299 days
- 2009 26 cruises, 303 days

European projects SESAME, BIOFUN, HERMES, ESONET, EUROSTRATAFORM, VECTOR , PROMESS1, MedSudMed, NEAREST, ECOOP, MAMBA, ADRICOSM, SARDONE,

Summary other Italian research vessels activity icluding:

- Out of service of *Salvatore Lo Bianco* (1967) and *Minerva* (1956)
- Loss of *Cerruti* and *Vettoria*
- Icorrectly Reported *Tecnopesca II*

Other Infrastructures

- **Odas Italia** Buoy in Liguria Sea 37 nm far from the coast and 1300 meters deep seabed
- **Aqua Alta** Oceanographic Platform in Northern Adriatic Sea 16 km off the coast of Venice

Other Information

- Eurofleet Project
- ERICO *Aurora Borealis* ESF Project , march 1st 2008- Feb. 28th 2012
- European Polar Summit (European framework for polar research) June 2009 Brussels

R/V Dallaporta is a Research Vessel operating in Adriatic Sea
R/V Urania is a R/V operating in Mediterranean Sea and Atlantic Ocean

Web page : www.cnr.it

Norway

By Per Wilhelm Nieuwejaar, IMR Institute of Marine Research

National update Norway
By Per Nieuwejaar

2. General

The Norwegian Institute of Marine Research (IMR) owns four vessels, operates two for other owners and rents another two vessels. They are:
"G.O.Sars", LOA 77,5 m, built 2003 (Approx 310 days at sea pr year)
"Johan Hjort", LOA 64.4 m, built 1990 (Approx 280 days at sea pr year)
"Håkon Mosby", LOA 47 m, built 1980 (Approx 280 days at sea pr year)
"G.M.Dannevig", LOA 28 m, built 1979 (Approx 180 days at sea pr year)
"Dr Fridtjof Nansen", LOA 57 m, built 1993, Owner: NORAD (Approx 310 days at sea pr year)
"Hans Brattström", LOA 24,3 m, built 1992,Owner: University of Bergen
(Approx180 days at sea pr year)
"Fangst", LOA 15 m, built 2000, renting approx 200 days a year
"Jan Mayen", LOA 63,8 m, built 1988, renting approx 75 days a year.
For more information about the vessels, please visit our website www.imr.no

3. Change in fleet structure

There has been no change in the IMR fleet structure since ERVO 2008.

4. New equipment/instrumentation acquisitions

A DP-system has been installed on the "Johan Hjort". Three portable winches have been procured in 2009 and a new synthetic cable with fiber optics will be delivered in the late summer of 2009.

5. Cruise activity

The cruise activity in 2008/2009 has followed the "normal" pattern for all ships. In 2009 the cruise activity will be less than normal in order to move scientist and technician working hours from data collection over to data analysis and completion of a number of externally funded projects.

6. Bartering/Rental Agreements (equipment and RV's)

No barters is planned in 2009, but we will have a barter cruise on a UK ship in the Weddell Sea in 2010 and hopefully a German barter on "Jan Mayen" also in 2009. We have rented out the G.O. Sars for some weeks in late 2008 and early 2009 for experiments with pumping fish from the trawl and on board the vessel without hauling the trawl.

7. Lost equipment

No major equipment losses since ERVO 2008.

8. Cooperation with other agencies

IMR supports IOCAS in China in their design of a new oceangoing RV.

9. Contact information

Per W. Nieuwejaar, e-mail: pern@imr.no, tel: +4755236849.

10. Other information

IMR has the project responsibility for the feasibility study for a new ice going research vessel which will be used by all marine science institutions in Norway.

Need of qualified technicians on fiber optics
Discussion on fiber optic cables, NIOZ has testing in summer
Some comments on experience in fiber optic cables and winches are needed (OFEG=TECH) ?

Ireland
Marine Institute
By John Breslin

Resume of *Celtic Explorer* and *Celtic Voyager* activities,

Number of days at sea, including commercial surveys (pipeline inspection, and CEFAS surveys)

- 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 system

- 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
- 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
-

3 years of P&O as provider for ship management, contract extended till sept. 2010

Celtic Explorer 5 years refit ended at February 2008: several improvements and modifications including:

- 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

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.

2009 challenges

- 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..

Communication between winch and "A" frame for avoiding accidents
Training of scientists and engineers/technicians too

Germany (1)
National Upgrade
By Klaus von Broeckel, IFM-Geomar

Resume of research vessels specification and scheduling.

Meteor resume of activities

- Good experience with azimuthal thruster and DP.

Polarstern

Severe accident with helicopter
Cruise speed reduced to 9 knots due to fuel costs.
Fewer working days for science
Preparation of a study for replacement

Sonne

Private ship will be replaced (public) in 2013.
Pacific and Indic cruises, chartered.

Maria S. Merian

- Excellent maneuverability and station keeping with pods and DP
- Another unscheduled docking due to sealing problems between one pod and hull in November

Poseidon

- Some winch trouble due to age
- will be replaced within the next five years. - First planning discussions will start this summer

Alkor

- Within the next two years major refit planned

New equipment

AUV "Abyss", 6000 m
ROV "Kiel 6000"
"Thinking about acquiring"

WINDER for very heavy instruments (it 'winds' cables for energy and communication around a synthetic rope) i.e. MeBo

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Germany (2)
National Upgrade
By Lothar_Meinders , BRIESE Schiffahrts GmbH &Co KG

Description of company, and Research department
Description of research vessels managed by the company and improvements on equipment and vessels, new installations

Maria S. Merain
V-Sat communications, heave compensation system testing, improvement of propulsion system.

Heinke
Mid life conversion ended with upgrade of scientific equipment (ADCP, MRU, etc)

Alkor
New sewage water treatment plant, German Government funds in the amount of 2.885 million € as economic stimulus package for general overhaul

Poseidon
Economical stimulus of 3 million € for overhaul. Las Palmas shipyard, replacement in 2015

Prof. A. Penck
Replacement planned in 2010

Saving 2-4% of consume using synthetic oil. Reduction of 6% CO emissions and reduction of 40-50% of total emissions (smoke).

Denmark
By Steen Silberg, DTU, AQUA

<u>The fleet</u>

	Owner	Type	Home Harbor	Year	BRT	Remarks
Dana	Technical University of Denmark	Global	Hirtshals	81	2545	Multi disciplinary
Gunnar Thorson	The Royal Danish Navy	Local	Korsør	81	1211	Oil spill
Pamiut	Greenland Institute of Nature	Regional	Hirtshals	71	721	Deep sea fishing
Alfred Jensen	Greenland Institute of	Local	Nuuk	67	167	

	Nature					
Havfisken	Technical University of Denmark	Local	Hirtshals	63	20	
Ophelia	Copenhagen University	Local	Helsingør	59	28	Education
Genetica II	Aarhus University	Local	Aarhus	61	20	Education
Havkatten	Technical University of Denmark	Local	Copenhagen	70	6	

Vessel strategy

- New 65m global multipurpose research vessel design for North Atlantic research including Greenland to replace Dana
- Some Navy vessel will be able to support minor hydrographical tasks
- Two new 25m regional multipurpose research vessels to replace all smaller vessels in the North Sea, internal Danish waters and the Baltic Sea.
- New 35m vessel to handle fish stock monitoring and education of fishermen

Design of a new Danish research vessel

- Modern state of art research Vessel design to carry out:
  - Research within
    - Fisheries
    - Marine Biological
    - Metrological
    - Geological
    - Hydrographic
    - Arctic
    - Climate
    - Environmental
  - Monitoring within
    - Fisheries
    - Environment
- Replace R/V Dana from 1981 with an expected life of 30 years
- Worldwide operation
- Expected price 45mill euro

Requirements

- Ship
  - 65 m
  - 15 knots at sea state 5
  - ICE class 1A or similar
  - POS CLE 1 or similar
  - Endurance 40 days or longer
  - Redundant propulsion
  - Cruise speed up to sea state 7

  - Research capability up to sea state 5
  - AC for 35 degrees temperatures
- Research
  - Research keel for acoustic equipment
  - Observation deck on top of bridge
  - Moon pool with crane
  - Mid ship hangar with crane
  - A-frames at transom and starboard
  - 5 std ISO 20" containers
  - Labs
    - 90m2 dry lab
    - 60m2 wet lab
  - Mobile winches
    - Net drums
    - Trawl winches
    - Hydrographical winches
    - Gilson winches
    - Constant tension winches
    - Core handling winches
    - Umbilical winches

Equipment news

- New lines of very low cost equipment:
  - Underwater Video equipment
  - Buoys with various sensor configuration, data logger and mobile telephone communication
  - Towed acoustic equipment
- Upgrade of systems:
  - Bottom video sledge
  - Vessel information systems
  - Fish registration systems
  - ROV with new top side
  - Container laboratories
- New container area
  - Designed for at least 25 20" containers
  - Lab containers supplied with sea water, cold and hot water, electricity, network, etc.
  - Area fully lighted

New data system

A new data system SIS DP, which acquires data from CTD, SS water, meteo, etc., and it integrates and stores in a Data Base system.
This system validates the data in a post cruise procedure.
The system offers a presentation layer which is used for planning cruise offering time scheduling calculations, 2D and 3D data presentation, and graphs of meteo data, water sampling , fishing trawls, etc.
An extension of SIS DP is FreeSIS , a free data system analyzer of Dana data that could be used in cruise or post cruise for extract and analyze data.
New features on FreeSIS software are:

- Area based searching via the Google Earth Plug in
- Select type of gear and area and get all historical data
- Add your own mapping data (KML-files)

  - KML data provider which connects to the FreeSIS server so you can select KML layers we provide from there
  - Import of local KML data, which can be saved to automatically reload then next time the mapping section of FreeSIS is opened
- Import of more historical data into the Land database, including CTD data
- The cruise line is now plotted in full resolution
- In order to run the FreeSIS application you need the following software:
  - Windows 2000/XP/Vista
  - Active Internet Connection
  - Google Earth Plug-in (Google Ocean)
  - .Net Framework 2.0

Belgium
By André Pollentier, RBINS, MUMM

R/V Belgica

2008 trajectories mainly southern bight of North Sea
R/V Belgica has one crew only, which limits number of days at sea.

- *8 (46 days) Environmental monitoring BCS*
- *3 (26 days) Belgian RP "sustainable development"*
- *9 (47 days) Geophysical EC-FP6 Hermes (Hot spot ecosystems Gulf of Biscay, Galicia bank, ..) & Sed. movements (sand & gravel extraction)*
- *4 (29 days) Fisheries research ICES-WG & Belgian NDGP*
- *5 (26 days) Thematic programs eg optical remote sensing products, scientific diving, students, …*

New equipment

- Kongsberg 3002D multibeam echosounder in summer 2008
- New Kongsberg EA 400 Echosounder with additional 38 kHz 7° Transducer

The ship is 25 years old and is planned in 2008 an inquiry among the Belgian scientific community to define science missions in the next decade(s) considering the working groups on (Bio-) Chemical, biological, geophysics, fisheries. Then between February and October 2009 do a feasibility study (1st approach) for decide between a major refit of the existing Belgica or new build taking into account the outcome of the science missions inquiry (Strategy and cost estimate) .

Casco Insurance was renewed on a yearly basis.
Claims running

1. Illegal Gillnet incident, Bantry Bay Irish Waters
2. Subsequent harmful vibration – one blade badly repaired.
3. PS Main Generator Incident
4. Shore supply incident during maintenance period
   at ships repair yard (claim versus ship yard as well)

1. Ilegal gillnet incident produce damage in propeller blades and subsequent repair produce vibrations due to badly blade repair.

<u>New Surface Seawater sampling system</u>

The measured parameters are : temperature , salinity, chlorophyll a , pH, nutrients, pCO2 down welling radiation, PAR .

The main features are: running autonomously controlled by GPS position, self cleaning (after each cruise), and automatic water sampler for further lab analysis

New data acquisition system

- The oceanographic data acquisition system ODASIII collects, processes, stores navigational, oceanographic, meteorological and hydrographical data.
- The data can be displayed in real-time or off-line at different client stations all over the vessel.

New antifouling system that consist on adding fresh water, acid, high pressure and Chlor

All underway acquired data is transmitted to the shore twice a day using Inmarsat Fleet77 or more when in range of GPRS network)

Detailed scientific cruise programs, trajectories and underway data of key parameters are on MUMM's website http://www.mumm.ac.be

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Bulgaria

By D. Solakov , Bulgarian Academy of Science, Institute of Oceanology

Resume vessels activities in 2008

Akademik, 65 days, between class repair (refit) , 15 cruises
Prof. Valkanov, 12 days, class repair (refit) 4 cruises

Cruises till July 2009

Vessel	Cruises	Institutes	Number of days	
R/V Akademik	NATO TSS09	IO-BAS & NATO	5	February
R/V Akademik	SESAM	IO-BAS	3	April
R/V Akademik	BIO-OPTIC	IO-BAS & JRC-Ispra	18	May
R/V Akademik	SOUTH FLUX	IO-BAS & Melrose Recourses	30	May-June
R/V Akademik	BS-Ancient coastlines	IO-BAS & LDOL Colombia University NY	8	June
Total			64 days	

New Equipment

Echosounder Simrad EK60
Multibeam echosounder Reson SeaBat 7111

Belgium

By André. Cattrijsse, VLIZ.

R/V Zeeleeuw

- Refit Pilottender
- Operated by VLIZ & Dept. Fleet
- Coastal Zone
- Daytrips, short time scheduling
- 150 days at sea

New Landbased facilities

- House : Lab facilities & lodging
- 4 Hangars (storage)

New Coastal RV

- Project started in 2005
- Complementary with Belgica
- End 2006 : concept
- Aug 2007 : 1.1 mil €/yr (ship + land based facilities)
- Operational costs remain responsibility of Dept. Fleet
- Project passed all steps
- Need of final ratification by Flemish Government
- 12.5m € (incl vat & sci equip)
- Tender out late 2008/ early 2009
- Name Simon Stevin
- approx. 35m
- 10 scientists
- mainly daytrips but more frequently multiple day cruises
- Operational costs remain responsibility of Dept. Fleet
- Near coastal area Belgian Continental Shelf
- Hull - Le Havre - Bremerhaven

INVITED PRESENTATIONS

1 Code of conduct marine scientific research	**G. West**
MEPC observer status & UN MSR guide	**R. Rogers**
2 New Spanish regional vessel	**J. Diaz**
3 New arctic Norwegian vessel	**P. Nieuwejaar**
4 New German RV	**K. Von Bröckel**
5 Update on US fleet programs	**D. Rolland**
6 Video on Aurora Borealis	**K. Von Bröckel**

1 Code of conduct marine scientific research

By Geraint West and Roland Rogers, NERC, UK

Inside this title the following items are revised:

Research Vessels Code of Practice

OSPAR CODE OF CONDUCT FOR RESPONSIBLE MARINE RESEARCH IN THE DEEP SEAS AND HIGH SEAS OF THE OSPAR MARITIME AREA

The code of conduct incorporates comments from the International Council for the Exploration of the Sea (ICES) and elements of the International Research Ship Operators' Meeting Code of Conduct for Marine Scientific Research Vessels proposed by the Marine Board of the European Science Foundation.
(27th June 2008)

UN General Assembly – Report of Secretary General –Oceans and the Law of the Sea

106. *Code of Conduct for Marine Scientific Research Vessels*. At its twenty-first meeting, in October 2007, the International Research Ship Operators' Meeting adopted a Code of Conduct for Marine Scientific Research Vessels. The Code recommends, inter alia, that every vessel conducting marine science should develop a marine environmental management plan and should be operated in compliance with the International Safety Management Code. As stated in its conclusion, all anthropogenic activities have potential environmental impacts and the objective of the Code is to minimize those impacts while adopting a pragmatic approach that facilitates the conduct of marine scientific research.
(29th August 2008)

CONVENTION ON MIGRATORY SPECIES DRAFT RESOLUTION ON ADVERSE ANTHROPOGENIC MARINE/OCEAN NOISE IMPACTS ON CETACEANS AND OTHER BIOTA

Appreciating the OSPAR Code of Conduct for Responsible Marine Research in the Deep seas and High Seas of the OSPAR Marine Area and the ISOM Code of Conduct for Marine Scientific Research Vessels; providing that Marine scientific Research is carried out in an environmentally friendly way using appropriate study methods reasonably available;
(26th November 2008)

Revision of UNCLOS MSR Guidelines

IMO MEPC Shipping Noise

TORS of IMO/MEPC Noise Correspondence Group (CG)

1 Identify and address ways to minimize the introduction of incidental noise into the marine environment from commercial shipping to reduce the potential adverse impact on marine life, in particular develop non-mandatory technical guidelines for ship-quieting technologies as well as potential navigation and operational practices; and
2 Provide reports to the Committee [IMO/MEPC]

IMO/MEPC Noise Correspondence Group (CG)
Lead by Lindy Johnson NOAA USA
Participating States as off 20081230

Argentina, Bahamas, China, Germany, Italy, Japan, Liberia, Marshall Islands, Panama, Republic of Korea, Singapore, Sweden, The Netherlands, USA, UK

Participating Organizations'

CLIA, CMS, FOEI, IACS, ICOMIA, ICS, IFAW, IMarEST, INTERTANKO, ISO, IUCN, IWC, WWF

IMO – ISOM as a Participating Organization

ISOM task Chair and Vice Chair to prepare briefing paper on benefits and issues of becoming IMO Participating Organization - 2009
Chair/Vice Chair ISOM prepare paper 2009/2010
Paper presented at ISOM meeting 2010
ISOM adopt proposal [if then]
ISOM write to General Secretary IMO asking to apply
Application submitted to IMO – targeting specific IMO Committees [MEPC]
ISOM member get their IMO delegates to lobby in support of PO application

Underwater Noise Update

New papers on underwater anthropogenic noise

- ESF Marine Board, *The Effects of anthropogenic sound on marine mammals*
- OSPAR SMRU *Overview of the impacts of anthropogenic underwater sound in the marine environment*
- UNEP/CMS resolution 9.19 *Adverse anthropogenic marine/ocean noise impacts on cetacean and other biota*
-

EUROFLEETS – WP3

Participation of NERC in Eurofleet, 4 year (2009-2013) EC project and 0,5 million euro inside working package 3 and with responsibility in the following tasks:

- Research Vessel - Life Cycle Assessment (LCA)
- Research Vessel Environmental Management Plan
- Research Vessel Environmental Management System
- Guidelines towards future new buildings and innovative eco-design for regional vessels

2 New Spanish regional vessel

By José Ignacio Diaz Guerrero IEO, Spain

IEO Instituto Español de Oceanografía (Spanish Oceanographic Institute)
IEO new regional vessels under construction
By José Ignacio Díaz

Two Regional Research Vessels
Delivery: December 2009 and December 2010
2000 m working depth
Icelandic bow as improvement
ICES CR 209
Sea Trials dec 2009

Main specials

- Oceanography & fishery research
- Multipurpose platform: 2 x 20' containers
- Endurance 10 days; 330 days/yr.
- Diesel-electric
- 11 scientist & technicians + 12 crew
- Atlantic & Mediterranean waters
- Noise and vibration abatement
- DP1: Dynapos **AM/AT**
- Clean ship
- Length 46,8 m
- Width 10,5 m
- Draught 4 m
- 988 GT
- 3 x 846 kW (1500 rpm)
- 1 x 200 kW (Harbor set)
- 2 x DC 900 kW
- 2, 5 blades fixed pitch prop.
- 2 RIM thrusters
  - Bow: 160 kW
  - Aft: 90 kW
- Drop keel: 2,5 m
- Gondola: 0,9 m

Equipment

- Multibeam EM710
- Parametric source TOPAS PS18
- Hydrographic EA600
- Scientific echosounder EK60: 6 freq.
- Scientific multibeam ME70
- Trawl sonar FS 20/25
- Scanmar
- ITI
- ADCP: 150 kHz
- HiPap 500

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3 New arctic Norwegian vessel
By Per W. Nieuwejaar, IMR, Norway

A new ice going research vessel is proposed as replacement of "Lance" and "Jan Mayen" and the Parliament funding for feasibility study, is dated on December 2007.
LOA: 100m, LPP: 84.8m, Beam: 20.0m, Draught: 7.6m
A description of the organization of committees for construction, integrating Steering committee, user committee and project organization by IMR and Polar Institute were reported.
The project plan starts on 2008 with concept definition and technical specifications, contract on early 2010 and delivery in late 2011 starting the first cruise in summer of 2012.

The vessel will be multifunctional, icebreaker, helicon carrier, as logistic vessel and clean ship.
The classification will be DNV Polar 10 ICEBREAKER with Diesel-electric engines and Z-Drive propulsion system and two tunnel thrusters in the bow (DP)
The vessel will be multipurpose vessel; therefore will carry fisheries studies, physical and chemical oceanography, seismic and piston coring, she Also will operate with AUV and ROV.
The ship will be designed to be a clean ship, and she will not be designed to completely meet"ICES 209 recommendations for radiated noise" since acoustical stock assessment is not a primary function for the vessel, but every effort possible will be done in order to reduce noise and vibrations as much as possible to create the best possible working conditions for instruments and personnel.
For acoustics two drop keels are planned and a"box keel" for multibeam, separating the transducers 60 cm from hull.
A moon pool will be used for sampling on ice covered waters.
Will load till 25 20' containers?

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4 New German RV(replacement SONNE)
By Klaus Von Bröckel IFM-Geomar

The ship will replace the RV Sonne and are about to end the discussion for scientific requirements.
Federal Waterways Engineering and Research Institute (Bundesanstalt für Wasserbau - BAW) is in the final stage of the preparation of the technical design specification and the general arrangement, which will be the base for the tender in July 2009.
For the first time the tender will be for construction and operation of the ship during 10 years. That means a consortium between Shipyard Company and Operation Company and the objective is that Operation Company will participate in the construction and is intended to not having big modifications after the delivery.
The Federal Government, as well as the five German coastal states, have allocated a sum of up to 110 M € for the construction of a sophisticated deep sea research vessel as substitution of "Sonne".
A summary description of RV Sonne and history was given.
The ship will be a "bigger Maria S. Merian" with POD propulsion and redundant machinery (sea-worthy, energy-efficient, environment friendly, superb maneuverability), low noise, DP, stabilization, stren ramp,...
The acoustic equipment will include multibeam (deep 0.5° x 1° beam-opening - 16 x 8 m, shallow), sub bottom profiler, ADCP, USBL.
The 500 m2 of laboratories will include wet and dry thermo-regulated labs, 2 hangars, lab container space,...
The working deck, of 600 m2, will be designed for simultaneous operation of ROV and AUV, containers, "A" frames, cranes and winches with capacity for 6,000 to 12,000 meters cables.
A seismic compressor will be installed onboard and 2 airgun arrays, 2 hydrographic wells, coring capability.
The crew is of 32, in single cabin, plus 40 scientists in 28 single and 6 double.
The requirements for the shipping company are:
- Bridge
    - 3-watch-ship
- Scientific-technical support (WTD)
    - 4 persons for
        - maintaining all sensors
        - E-mail
        - Data distribution and collection
        - Hydro-acoustic systems
        - Weather station

- All installed electronic systems (e.g. winches)
- General support for scientists

- On deck
  - 2 to 4 persons over 24 hours (depending on scientific requirements)
  - handling of all winches and lifting devices
  - General support for scientists
- Machinery
  - maintaining of all installed laboratory equipment
  - General support for scientists
- 'catering'
  - One mess room with 'overall area'
  - Self-service (60 min per meal)
  - Regular cabin cleaning
  - Bar with self-service

Multibeam (0.5° x 1° beam-opening - 16 x 8 m) will be installed in an “integrated gondola”.
Other improvements are folding A-frame and multifunction frames.
For energy-efficiency objectives the use of waste heat and sky sails will be considered. Also fuel-cells are considered within harbors and as a very clean ship during specific sampling periods but still very expensive and not proved. This study will be carried with the participation of Hamburg University of Applied Sciences.

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5. Update on US fleet programs
By D. Rolland, Alion Science, USA

Presentation of project AGOR,

ocean class R/V funded by US Navy. Industry Design Competition During 2010, Start of Construction for First Ship Expected in 2011, Delivery in 2014.
(https://www.fbo.gov/spg/DON/NAVSEA/NAVSEAHQ/N0002409R2212/listing.html)
Analysis of Key areas as noise, propulsion configuration, propeller design, DP capabilities, etc., Sonar performance studies, bubble sweep down, hull design.

Full Compliance with ICES 209 is very expensive, not required for general purpose vessel.
Some reduced level of performance is still desired.

Regional Class Research Vessel

Class of up to 3 small, regional, general purpose research vessels
Approximately 40 Meters long, mono hull
To be operated by UNOLS academic institutions
Two Contracts Awarded May 2006 for Competitive Preliminary/Contract Design Period
Phase I Designs Completed late 2008
NSF funding shortfall
Design review to be held in August 2009
Construction Planned to Start 2010 or 2011

Alaska Region Research Vessel (ARRV)

Final Design Review Completed October 2008
$123M Total Budget
Z Drives To Be Provided Owner Furnished
Investigating 3.7m Hull Lengthening to Accommodate Anti-Roll Tank
Funding in Economic Stimulus Bill
RFP Released March 2009
Award Expected October 2009
Delivery in 3 Years +/-

T-AGS 66 Survey Ship

109 Meter, Multi-Purpose, Survey Ship
Owned by US Naval Oceanographic Office; Supports US Naval Fleet
Sole Source Procurement from Original Builder of T-AGS 60 Class
Modified Repeat of T-AGS 60 Class: 9 Meter Increase in Length, Moon pool for AUV operations, Additional Staterooms, Convert DC to AC Propulsion
RFP Released in April 2009
Award Expected in September 2009
Delivery in 2013

T-AGS 60 Class Sonar Upgrades

Class of Six - 100 Meter Survey Ships
One Upgraded Per Year
Third Ship Completed in June 2009
Flush Mounted Systems Replaced with Gondola

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6 Video on Aurora Borealis K. Von Bröckel

Friday 15 May

1.	**Ballast & waste water treatment**	**L. Meinders**
2.	**Hydraulic vs. electric winches**	**V. De Angelis**
3.	**MacArtney on new winch technology**	**H.J. Hansen**
4.	**EUROFLEETS-project: partners & activities**	**P. Nieuwejaar**
5.	**Loss of lives at sea**	**P. Nieuwejaar**
6.	**Engine alignment problems on Celtic Explorer**	**J. Breslin**
7.	**New online survey system**	**J. Breslin**
8.	**Dealing with piracy, the experience of Pelagia**	**M. Rietveld**
9.	**ERVO web pages**	**S. Sà**
10.	**ESF Marine Board matters**	**A. Carbonnière**
11.	**OFEG & OFEG Tech**	**M. Rietveld**
12.	**ISOM 2008**	**P. Nieuwejaar**
13.	**InMarTech 2008**	**O. Ouedec**
14.	**Extension EEZ**	**J. Danobeitia**
15.	**Charter party agreements**	**M. Rietveld**
16.	**Agenda topics for 2010 - Place & date ERVO 2010**	**All**

1. Ballast & waste water treatment

By Lothar Meinders, Briese Schiffahrts GmbH & Co KG, Germany

Mr Meinders exposed the new regulation on problem with ballast water consisting in the distribution of foreign species around the world. Larvae and small animals and algae are transported inside ballast tanks.

- November 1997 Introduction of IMO Resolution A. 868 (20) "Guidelines for the control and management of ships ballast water to minimize the transfer of harmful aquatic organism and pathogens"
-
- IMO Convention on Ballast Water include 30 states and 18 of them signatories which represents 15,36% of world mer4chant fleet: Albania, Antigua & Barbuda, Barbados, Egypt, France, Kenya, Kiribati, Liberia, Maldives, Mexico, Nigeria, Norway, Saint Kitts and Nevis, Seychelles, South Africa, Spain, Syrian Arab Republic, Tuvalu.

The limits established by IMO are :
<10 viable organisms/m3 ≥ ≥ 50 µm
<10 viable organisms/ml ≥ 10 µm
<1 cfu/100 ml Vibrio Cholera
<250 cfu/1 00 ml Escherichia Coli
<100 cfu/1 00 ml Intestinal Enterococci
Which represents nearly clean drinking water?

In 2004, IMO adopted an International Convention for the Control and Management of Ships' Ballast Water and Sediments.
The IMO convention will require ships constructed in 2009 or later to meet ballast water treatment standards and by 2014, existing ships must also start to meet these standards.

The Convention requirements are:

Carry out ballast water and sediment management on all voyages

- Have on board an approved ballast water management plan and a ballast water record book
- Ships of 400 gt and above subject to surveys and certification

Vessels build after 2009 are online to follow a treatment of ballast water. Vessels built before must to comply with exchange or treatment of BWin 2014 or 2016 depending on volume of ballast tanks.
Mr. Meinders explained what the methods for exchange, treatment and isolation are and described the followings:

Ballast exchange sequential method
Ballast exchange flow through method
Ballast exchange dilution method
Ballast water treatment systems of different companies
Conclusions are:

- Ballast Water Management Treatment plants will become obligatory for research vessels, although nearly no ballast water exchange takes place.
- For new buildings space for those power plants have to be considered in anticipation of IMO Resolution comes effective.

Some discussion on USA waters, costs and rules inside USA waters.

2 . Hydraulic vs. electric winches

By Vince De Angelis, Canadian Coast Guard, Canada
Mr. De Angelis exposed a presentation dealing with the decision that must be taken when planning renewal of winches on board oceanographic vessels, or on new constructions.
His study is a comparison between electric, electro-hydraulic and hydraulic drive science winches. Several winches of different Canadian vessels are analyzed and opinion of users is described. For this analysis different variables are taken into account: maintainability, costs, consumption, reliability, size, speed, payload, etc.
After this study, his conclusions are:

- Electric, electro-hydraulic, and hydraulic drive winches each possess advantages and disadvantages.
- Selection of winch drive should be based on the intended use and should be compared against weighted criteria.
- All three drive systems have been used successfully on board commercial fishing vessels and research vessels.
- Many newly constructed commercial fishing vessels and research vessels are installing electric drive winches.

3. MacArtney on new winch technology
By Hans-Jørgen Hansen

MacArtney Launch and Recovery Systems

Company description, Iso 9001-2000

- Winches
- A-frames & Cranes
- Rotary products

Description of winch series including electrical, right angle, fiber armored cables, low temperature operation winches, ROV umbilical winches.
Winch certification.
Description of winch design
ROV Active Heave Compensation – AHC Winches
Description of A-Frames and new developments
Crane based LARS
Training

Some interesting video on winch heave control

4. EUROFLEETS-project: partners & activities
By Per Wilhelm Nieuwejaar, IMR Institute of Marine Research, Norway

Presentation of EUROFLEETS project in ERVO meeting
Still necessaries for marine research, research vessels and equipment and its operation represent high running costs. Due to fragmentation of these research infrastructures, EUROFLEETS pretends to coordinate European research vessels fleet and equipment for optimization of resources.

Explain objectives and concepts as common strategic, more cost efficiently of the fleet, and a wider sharing of knowledge and technologies

- Promote greener and sustainable research vessel operations and responsibility,
- Provide all European Researchers with a full access to high performing research fleets to conduct marine research,
- Foster the coordinated and joint development of European fleets in terms of capacity and performances.

A description of partners, scheduling, and working plans of the project are presented

5 . Loss of lives at sea
By Per Wilhelm Nieuwejaar, IMR Institute of Marine Research, Norway

Mr. *Nieuwejaar presents an example on procedures and recommendation followed in the case of death at sea with two real cases.*
These recommendations start from avoiding the spreading of bad news through not official channels and ending with full support to families.
This undesirable situation causes that the ship management people normally are not prepared and protocols are not established. Then, added to this discouraging feeling, there still the bureaucracy and international rules.

6. Engine alignment problems on Celtic Explorer
By J. Breslin

Celtic Explorer - Generating Engine Alignment Problems

- A small area of de-lamination was discovered in the main journal/thrust
- Further examination of the crankshaft in the workshop found the journal not to be delaminated but layered with white metal in one area near the oil hole.
- Following re-assembly, the engine could not be aligned with the alternator. Further investigation on 23 January 2008 found that the transportation plates had not been removed from the engine movement limiters at the time of new building.
- Study of the port and centre engines also revealed that the transportation plates were still fitted
- The engine manufacturer Wartsila forbade any further operation of the engines until rectification work had been carried out and Lloyd's Register placed a Condition of Class upon the vessel.
- Examination of the flexi-mounts on all engines found them to be suffering from a high level of creep/settlement, having been subjected to an abnormal operating environment. The attending Metallistic (Trelleborg) specialist advised that although good enough to remain in operation for the short term, they should all be renewed. Unfortunately, new flexi-mounts could not be obtained at short notice.
- Lloyds requiring that certain criteria be met prior to lifting the condition, of class as follows
  Fracturing of bedplates, Vulkan coupling rubber fatigue and cracking,

  Removal of transportation plates and clearance of limiters "shipbuilders and/or engine manufacturers negligence"
  Costs for all of the repair works are subject to a claim under the owners H&M policy and this claim is progressing well

7. New online survey system
By J. Breslin

Survey planning system

IM has developed a Survey planning system for improve of survey information management, cruise proposal, time scheduling. Open access for managers, scientists and crew. Survey reporting and statistical analysis

8. Dealing with piracy, the experience of Pelagia
PIRACY Considerations on passage of the Gulf of Aden and/or the North West Indian Ocean East of Africa
By M. Rietveld , NIOZ, The Netherlands

Mrs Rietveld exposed a situation sailing with Pelagia in waters front Somalia. At this time, the vessel must to follow international rules due to the situation in the area. A security corridor and schedules are fixed. International fleet is defining these schedules.
Start with description of problem, number of attack in 2008 and the reduction due to Atalanta Operation.

The contact information is thru MSCHOA (http://mschoa.org)
Address Ops Centre
Maritime Security Centre (Horn of Africa)
European Union Operation HQ, Northwood Headquarters
Sandy Lane, Northwood
Middlesex HA6 3HP, ENGLAND
Tel: +44 (0) 1923 958545 Fax: +44 (0) 1923 958520Email: postmaster@mschoa.org
In august 2008 a security patrol was installed in the area and an international transit corridor was defined. Group Transits have been designed for vessels proceeding at the following speeds: 10, 12, 14, 16, and 18 kts. Some cruises canceled.
Advice for keeping East of 60º East or at least 600 nm from East African coast For preventing attacks some devices are suggested including *acoustic.*
Information on forms and contacts were presented

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9 . ERVO webpages
By Sandra Sá, EurOcean, Portugal

EurOcean Updates and New Developments

EurOcean Updates
Actual structure of EuroOcean, description of steering committee, President Per Nieuwejaar , IMR, Norway, Vice-President Antònio Pascoal, FCT , Portugal, Vice-President Salvino Bussutil, MCST , Malta.

ERVO Webpage
Including a list of European Marine research meetings with agenda, attendants and minutes

EurOcean InfoBases
UV Infobase: An Underwater Vehicles Info-base is added
LEXI Infobase: Infobase of the large exchangeable instruments available for marine research in Europe
RV Infobase: Infobase of the European research vessels (RVs) operating in Europe and abroad. It includes research vessels from the coastal to high seas (≥ 10 meters).

New EurOcean Products
European Research Vessels Infobase :
Should EurOcean include the Russian Fleet on the European Research Vessels Infobase?

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10 Updates on Marine Board activities with regard to infrastructures
By Aurélien Carbonnière , Marine Board Secretariat

This presentation treated with General EU updates and MB interactions with the infrastructure component - Projects & Initiatives.

General EU updates
The European Marine and Maritime Research Strategy is to build new infrastructures, exploring new financing scheme
European Strategy Forum on Research Infrastructures (ESFRI)

- Importance of RI for regional development (ESFRI WG)
- 2nd version of the ESRI roadmap:
  - ✓ Svalbard Arctic earth observing facility

- ✓ European Marine biological resource centre
- ✓ European plate Observing System

- Development of a European legal framework for RI (to provide legal status in all MS – facilitate joint establishment / operation of RI)

- **RV Aurora Borealis**
  - Development supported by FP7 ERICON project (4.5M€), coordinated by the ESF-European Polar Board (EPB)
- **ERA-Net on maritime technologies – MARTEC**
  - Call (deadline 29th May)

FP7 calls for integrating activities

- Suggestions for topics (call July/Sept09)

RI for natural hazards (seismology)
RI for hydraulic research
Research network of sites/platforms for multidisciplinary research and data collection
RI for Polar research
RI for coastal research
RI for water resource observation

- Suggestions for topics (call Jan09)
  - *SEADATANET II*
  - *Carbon cycle observation*
  - *Biodiversity research*
- Suggestions for topics (call Jan12)
  - ***EUROFLEETS II***
  - *Research aircrafts*
  - *Mesocosm studies*
  - *Earth system modeling*
  - *Natural history collection*
  -

MB interactions with the infrastructure component

- **Projects**

EMAR²RES project - *European MARine and MARitime REsearch and Science*

- Keywords: **Competitiveness & Climate Change**

Coordination: CESA (Waterborne TP);
5 partner's incl. Marine Board: as the sole "marine" partner

- Objectives:

- exploiting **synergies** between marine and maritime research communities (e-navigation, ballast waters, etc);
- setting a **Policy Interface Panel** (PIP)
  - Foreseen start in autumn 2009; 28 month; 500k€
  - MB attends Waterborne meetings (& vice versa)

MarinERA (ERA-NET)

- MarinERA call: 4.8 m€ : 5 projects funded (North Sea, Med)

- Currently drafting a final report based on outputs from MarinERA infrastructure meetings/fora
- 3rd networking meeting on marine sensors technologies (FA, SMEs, researchers): key recommendations
- 3rd and last Infrastructure Workshop was "« Towards a long-term and sustained European network of coastal observatories"

► Enabled to constitute a consortium to respond to the July/Sept09 call on Coastal Research – **JERICO**

➔ Regional approach (from acquisition to dissemination of in situ data) in context of MFSD, WFD

➔ Better use RV, fishing boats and Ships of opportunity (ferry box systems) for systemic seawater monitoring

➔ Instrumentation task on re-activating EURO-ACT (EU market, for a SMES/academia/user)

➔Common procedures for measurement protocols, sensors calibration, etc

SEAS-AREA (FP7 ERA-NET proposal)

= overarching marine ERA-NET

Towards integrated European marine research strategy and programmes

Proposal submitted in April 09: 2m€, 3 years

Coordination: MICINN (Spain); 23 partners' incl. Marine Board

Objective:

- regional approach
- marine overarching platform for Research Funding Organizations',
- Develop and implement common research programmes (incl. infrastructures)

Status: evaluation ongoing

- **MB European Scientific Diving Panel (ESDP)**
  - Endorsed as MB panel in Autumn 2008
  - ESDP Kick off meeting 5 December 2008:
  - Common statements on ESDP operational mode & definition
  - Exchange updates on national Diving Committees
  - Enquire about EU guidance in terms of training issues,
  - Develop a database & portal, dissemination materials
  - latest publication in the American Academy of Underwater Sciences

Strengthen links with ERVO (scientific diving from boats…) and other EU groups/initiatives;

Updates on MB WGs

Latest MB position papers

- **The Effects of Anthropogenic Sound on Marine Mammals Marine Board-ESF Position Paper 13**
- **EMODNET – The European Marine and Observation Data Network**
- **Future Looks – Strategic Analyses for New Activities**

Current WGs (publication foreseen autumn 09):

- Chemical pollution

- Ecosystem approach to management

In preparation:

- MPAs

- BioTechnology

11. OFEG & OFEG Tech

By Marieke J. Rietveld, NIOZ, the Netherlands

OFEG Update on a bottom-up approach of research fleet co-ordination & harmonization

OFEG represents Europe's leading oceanographic research organizations and provides a *forum* to consider barter exchange and co-operation opportunities for the Global and Ocean Class research fleet.

Main objective: It consists of exchange of Shiptime and of major equipment based on 'bartering' without money-exchange; joint cruises exchange based on value points according to scientific capacity as agreed between members. This takes significant advantages as the access to a wider range of facilities, and the access to the marine areas beyond the scope of an alone country. At the same time, it shows a more efficient use of shiptime, reducing the costs and time on long passages. Reduction to the minimum of bureaucracy and general expenses

OFEG members: Ifremer (France), BMBF (Germany), NIOZ (Netherlands), IMR-UoB (Norway), CSIC (Spain), NERC (UK) mutual help when equipment get lost, recovery of drifting moorings, when within reach; en-route servicing and turn-around of partners' moorings, combined sampling and measurements for partners.

Joint scheduling of cruises: OFEG meets twice a year for fine tuning of cruise planning and cruise scheduling, such as **geographical cruise schedules**

Announcement of opportunity: OFEG announcement of planned deployment of ships to the science community

Information exchange: harmonization and fine tuning of plans for replacement and upgrade of research vessels

Description of the fleet that includes

10 Global Class (90% of European GC Fleet) , 8 Ocean Class (53% of European OC Fleet) and 3 Regional Class (15% of European RC Fleet)

Road map of renewal of OFEG fleet

Description of bartering evolution, 10 years for the first 50 barter exchanges, 4 years for the next 50 barter exchanges.

Showing some statistics on bartering, amounting a total number of 1682 days within 100 exchanges.

OFEGTech : Provides a forum for communication and networking to support the development of major equipment and to improve cooperation between the OFEG partners. Next meeting is scheduled in Barcelona November 2009.

OFEG conclusions

1. Capital/investment plans to be shared by all members as they are revised throughout the year
2. OFEG-TECH to consider options to improve ROV payload, vehicle, and technician interoperability
3. Develop a standard letter to Principal Scientists offering ship-time on OFEG ships
4. Marine trial and equipment testing activities to be announced and open for all members to join in
5. Develop an OFEG Output Performance Measures document
6. Ensure that OFEG-TECH's ROV activities complement those planned under EUROFLEETS
7. Revise OFEG website in line with members' recommendations
9. OFEG meetings to be scheduled after OFEG-TECH

12 ISOM 2008

By Per Wilhelm Nieuwejaar, IMR Institute of Marine Research, Norway

The ISOM 2008 meeting was held between 20 22 January 2008 in Wellington, New Zealand with Chairman Fred Smits, NIWA, New Zealand , Vice-Chair Geraint West, NERC, United Kingdom .
Approximately 40 participants from 16 countries were attending the meeting.

- Team building day on 19 January and NIWA/Tangaroa visit on 23 January
- A very well planned and executed meeting !
- Minutes from 21st ISOM in Qingdao, China in 2007 is posted on the ISOM web, www.isom-info.org
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National Presntations

- *New Zealand in the World Ocean – A Tale of Two Hemispheres*
- *Climate Change and Boats and Trains and Planes*

Agenda Items

- National updates
- New Vessel Plans, New Builds and Modifications
  - Southern Surveyor Replacement
  - Discovery Replacement
  - Norway's New Polar Vessel
  - Aurora Borealis Update
  - US Oceanographic Programme Update
  - Spanish IEO Fleet Modernisation Programme
  - Haliotis Workboat: a New Concept for Coastal Survey
  - Sonne Replacement
  - DP2 on Tangaroa

- Environmental and Ecological Impacts
  - Green Ships
  - Ifremer's CONVENAV Project
  - Ecosystem Approach for Canada's New RVs
  - Energy Savings
  - Mobile Equipment on Hired Vessels

- Reports on External Workgroups
  - Eurofleets
  - OFEG and OFEG-tech
  - ERVO
  - INMARTECH 2008 and INMARTECH 2010

- Insurance and Liability
  - Review of the International Marine Insurance Market

- Admiralty Law in Research Vessel Operations
- Personal Accident Insurance

- High Latitudes
  - IMO regulations, Arctic and Antarctic Rules Update

- Safety and Security Issues
  - Piracy – RV *Pelagia* Passage through the Gulf of Aden
  - Should ISOM publish Safety/Accident/Near Miss Data?
  - Man over Board – Safety Training at JAMSTEC

- Diplomatic Clearance
  Should ISOM Apply for IMO Observer Status?

- Data Handling, Databases, Web Portals and Public Outreach
  - EurOcean web portal
  - Google Ocean and Classroom@Sea
  - POGO – International Research Cruise Database

- Research Vessel and Equipment Performance
  - Ocean Class AGOR Trade Studies
  - Multi-beam / Bubble Sweep-Down

- AUVs and ROVs
  - Ifremer submarines Update: Victor 6000 and Sysif

- Manning
  - Manning Standards
  - Medical Requirements

- Show and tell
  - ICES 209 Revision and Cost of Implementation
  - Wiki Technical Knowledge Base on BAS Vessels
  - Engine Alignment Problems *Celtic Explorer*

- 23d ISOM
  March 2010 at IFM-Geomar in Kiel, Germany

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13. Inmartech 08 8 – 10 October 2008; Toulon – France
By Olivier Lefort , Ifremer

- 85 participants mainly from Europe, Asia, North America
- 9 sessions :
  - AUVs/gliders
  - Manned submersibles
  - New vessels
  - ROV/AUV deployment and interoperability
  - Instrumentation and methods
  - Acoustic and seismic tools

- Buoys mooring observatories installations
- Data treatment, network and communication
- Lessons learned

14 Extensions EEZ

By Juan José Dañobeitia, UTM-CSIC, Spain

Report on the latest actions undertaken by Spain, together with some European countries, to present to the *Commission on the limits of the Continental Shelf (CLCS) of The United Nation for the Law of the Sea Convention,* 1982, criteria for an extension of the continental shelves. In this context, two specific areas were surveyed using Spanish Oceanographic Vessel Hespérides, which are:

- **The Celtic Sea and Bay of Biscay** accomplished with France Ireland, UK and Spain.
- **The Galicia Bank and Iberian Margin (Portuguese Margin)** carried out between Portugal and Spain.

In the first area the four coastal states have used both the formal lines (i.e Hedberg and Gardinier) in this joint submission. A limit based on the Hedberg formulae (60 nm from Foot of the Slope,FOS) has been generated from all of 8 foot of slope points (FOS1 to FOS8). On the seismic data submitted, sufficient sediment thickness has, in the view of the four coastal states, been demonstrated to allow the application of the 1% sediment thickness (The Gardiner formula) from FOS 5. Therefore, FOS 5 generates fixed points from the application of both the Hedberg and Gardinier criteria and the Gardiner points have been selected. Only the fixed points generated from FOS1, 4 and 5 actually contribute to establishing the final outer limit of the area that is subject of this joint submission. In the second case, an extensive geophysical survey was performed in order to map the sub seafloor by means of seismic and potential field data. A series of maps were shown with the track lines and the proposed lines for extension of the Shelves. The benefits of these joint submissions to the CLCS are summarized as follows:

- **Combined Datasets**
- **Pooled Expertise**
- **Provide experience for States who have other submissions to make**
- **Overcomes Unresolved Boundaries**
- **Division of Labor**

15. Charter Party Agreement

By Marieke Rietveld, NIOZ, The Netherlands

BIMCO "Supply time 89"with amendments

- This BIMCO charter agreement is fairly balanced between Owner and Charterer, widely accepted and even preferred by underwriters.
- Offering possibility for Mutual Indemnity & Waiver of Recourse.
- Charterer can be included in the P&I insurance policy as an additional named insured, which indemnifies the named insured against claims brought forward by any other of the named insured, and vice versa. (knock-for-knock)
- NIOZ requires a Charterers' Liability Insurance from Charterer, which NIOZ insurance brokers can provide

At the end of the meeting a discussion was held on the overlap between ISOM and ERVO, the format (presentations vs. discussion) and the future of ERVO. It was then decided that this should constitute the major topic for next year's meeting.

Agenda Topics for 2010 Place and date for ERVO 2010

ERVO 2010 will be hosted by Geraint West and Rolland Rogers at National Oceanography Centre, Southampton, on the 5th and 6th of May

Topics for ERVO 2010 may include

- **ERVO way ahead**
- **Designing research vessels : future needs**
- **Contingency plans (incidents and accidents and near incidents/accidents)**
- **Dealing with press/media**
- **Staffing issues (training, education, relation with scientists)**
- **Cruise planning/evaluation software**
- **Procurement of new instruments (procedures, financing, science needs, evaluation)**

Attendance list

Name	Organization	Country
André Cattrijsse	VLIZ	Belgium
André Pollentier	MUMM	Belgium
Aurelien Carbonniere	Marine Board - ESF	Belgium
Vince De Angelis	Canadian Coast Guard	Canada
Steen Silberg	DTU Aqua	Denmark
Olivier Quédec	IFREMER	France
Klaus von Bröckel	IFM-Geomar	Germany
Lothar Meinders	Schiffahrts GmbH & Co KG	Germany
Michael Ippich	Unterweser Reederei GmbH	Germany
Sönke Neben	Alfred-Wegener Institute	Germany
Alan Rowan	P&O Maritime Services	Ireland
John Breslin	MI	Ireland
Giuseppe Magnifico	CNR	Italy
Massimiliano Di Bitetto	CNR	Italy
Erica Koning	NIOZ	Netherlands
Marieke J. Rietveld	NIOZ	Netherlands
Per Nieuwejaar	IMR	Norway
Luis Menezes Pinheiro	COI/MCTES	Portugal
Sandra Sá	EurOcean	Portugal
Telmo Carvalho	EurOcean	Portugal
Dan Secrieru	GeoEcoMar	Romania
Stefan Florescu	GeoEcoMar	Romania
José I. Díaz	Instituto Español de Oceanografía	Spain
Arturo Castellón	CSIC	Spain
Juanjo Dañobeitia	CSIC	Spain
Edward B Cooper	National Oceanography Centre	UK
Geraint West	National Marine Facilities	UK
Roland Rogers	National Marine Facilities	UK