



Update

- **NIOZ Royal Netherlands Institute for Sea Research**
- **Ocean Facilities Exchange Group OFEG**
- **RV Newbuilds and plans elsewhere**

RVOC 2009

Marieke J. Rietveld, NIOZ, the Netherlands



NIOZ'
RV
Fleet

Ocean Class: RV PELAGIA (66 m)



Coastal RVs: RV NAVICULA (24 m)



RV STERN (15 m)





RV PELAGIA 2008:

353 operational days

Research areas: North Sea, North Atlantic Ocean: North East Atlantic – Equatorial North Atlantic (Brasil), Mediterranean Sea, Indian Ocean (Arabian Sea)

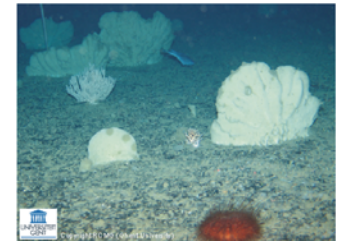
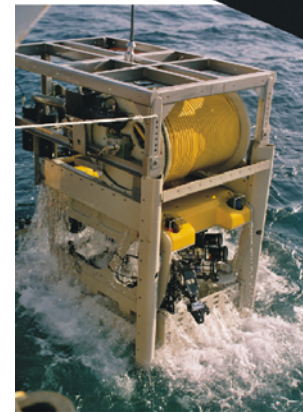
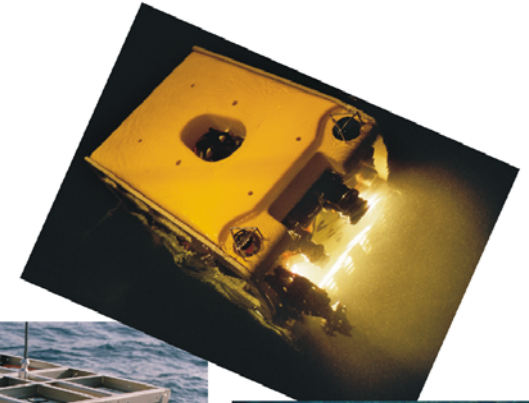
Exchanges: 5

- Barter cruise Indian Ocean Mozambique Channel: Dutch team on board German RV METEOR Jan/Feb
- Barter cruise Gulf of Cadiz: German team on board RV PELAGIA Feb/March
- IPY cruise RV POLARSTERN - ANTARCTIC Feb/April: Dutch team with all titanium Ultra Clean CTD sampling system (TITAN) with Ultra Clean Container (UCC) and Deep Sea Winch with Kevlar cable for trace metal detection
- Combined barter cruise NERC RV DISCOVERY: UK, German and Dutch team Irminger Sea Aug/Sep 2008
- Barter cruise Arabian Sea: UK team on RV PELAGIA Dec 2008/Jan 2009



Highlights 2008:

Deployment of small ROV CHEROKEE





Highlights 2008:

**Deep water test Movable Lander MOVE! and
successful deployment Galicia Bank**



Deployment at 3000 m

More info on the MOVE! system at

http://www.nioz.nl/nioz_nl/930340e486dc8929fcf2184d8036c0ea.php



Nerve-racking event 2008:

RV PELAGIA passage through the GULF of ADEN

4 – 7 December 2008

REPORTED INCIDENTS, ATTACKS & HIJACKING

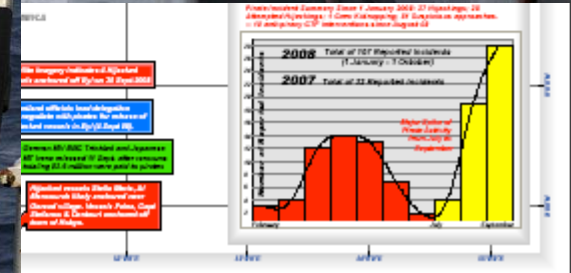
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DATE	LOCATION	INCIDENT	STATUS
04/12/08	12°N 45°E	Attack on oil tanker	Attacked
05/12/08	13°N 46°E	Attack on oil tanker	Attacked
06/12/08	14°N 47°E	Attack on oil tanker	Attacked
07/12/08	15°N 48°E	Attack on oil tanker	Attacked



French Navy vessel Jean Le Vienne

Convoy protected by French Navy





All time low 2008:

Helicopter crash taking two lives and three wounded

**During IPY cruise of German RV POLARSTERN -
ANTARCTICA 2 March 2008**



In the aftermath NIOZ decided on an accidents insurance, also covering all non-NIOZ cruise participants, irrespective of nationality



Plans for New acquisitions/upgrades

2008

**Kongsberg EM 300 Swath Multibeam system
upgraded to EM 302**

2009/2010:

MID-LIFE REFIT including

New data acquisition and data logging system

**New TITAN Ultra Clean CTD system with Large
Volume Samplers**



OCEAN FACILITIES EXCHANGE GROUP

a bottom-up approach of research fleet co-ordination & harmonisation



L'Atalante
James Cook
Discovery
M.S. Merian
Pelagia
Pourquoi Pas?
Sonne



Alkor
G.O.Sars
Heincke
Poseidon



Jan Mayen



Meteor



Sarmiento de Gamboa



Johan Hjort



Hesperides



James Clark Ross



Garcia del Cid



Thalassa



Le Suroit



Polarstern*)

The 2008 OFEG fleet

*) only joint cruises

www.OFEG.org

2008 OFEG fleet

L'ATALANTE	85	France	PELAGIA	66	Netherlands
LE SUROIT	56	France			
POURQUOI PAS?*	105	France	G.O. SARS*	77	Norway
THALASSA	74	France / Spain	JAN MAYEN	64	Norway
			JOHAN HJORT	64	Norway
ALKOR	55	Germany	GARCIA DEL CID	47	Spain
HEINCKE	55	Germany	HESPERIDES	82	Spain
MARIA S. MERIAN*	95	Germany	SARMIENTO DE GAMBOA*	75	Spain
METEOR	98	Germany			
POLARSTERN#	118	Germany	DISCOVERY	90	UK
POSEIDON	61	Germany	JAMES CLARK ROSS	99	UK
SONNE	98	Germany	JAMES COOK*	90	UK

OFEG fleet - **10 Global Class** - **90% of European GC Fleet**

21 RVs - **8 Ocean Class** - **53% of European OC Fleet**

6 countries - **3 Regional Class** - **15% of European RC Fleet**

* Built after 2000

only joint cruises

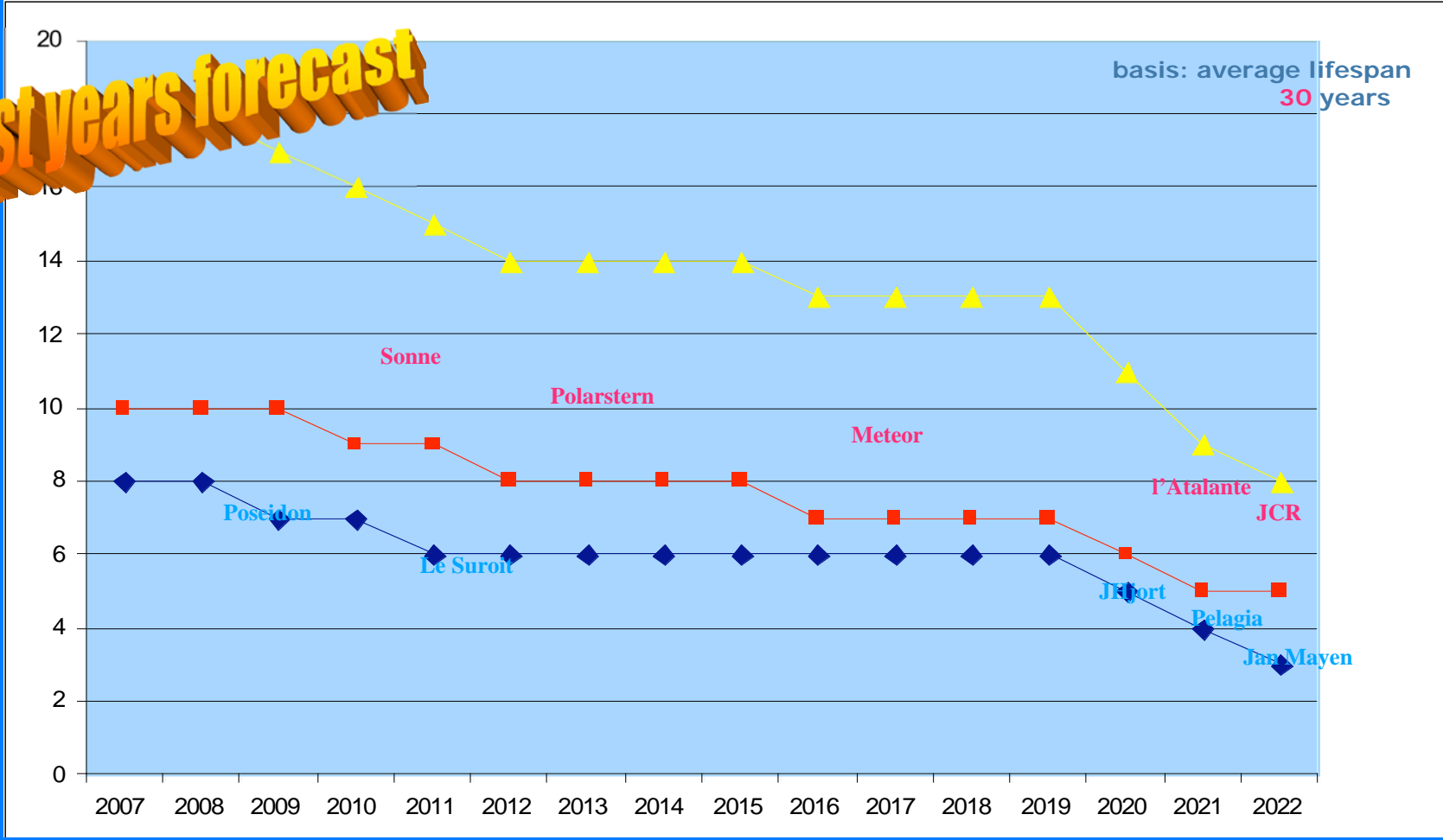


In Summary:

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

All present OFEG members, except NIOZ, run multiple fleets - totalling 18 of the 26 **Ocean** and **Global** Class academic research ships in Europe, as well as most heavy equipment

Last years forecast



Evolution of OFEG fleet without any* replacements

*RRS DISCOVERY replacement included

Roadmap of Renewal of OFEG Ocean and Global class RV fleet

2010 - 2030

legend

 scheduled

 recommended

 age 30 years

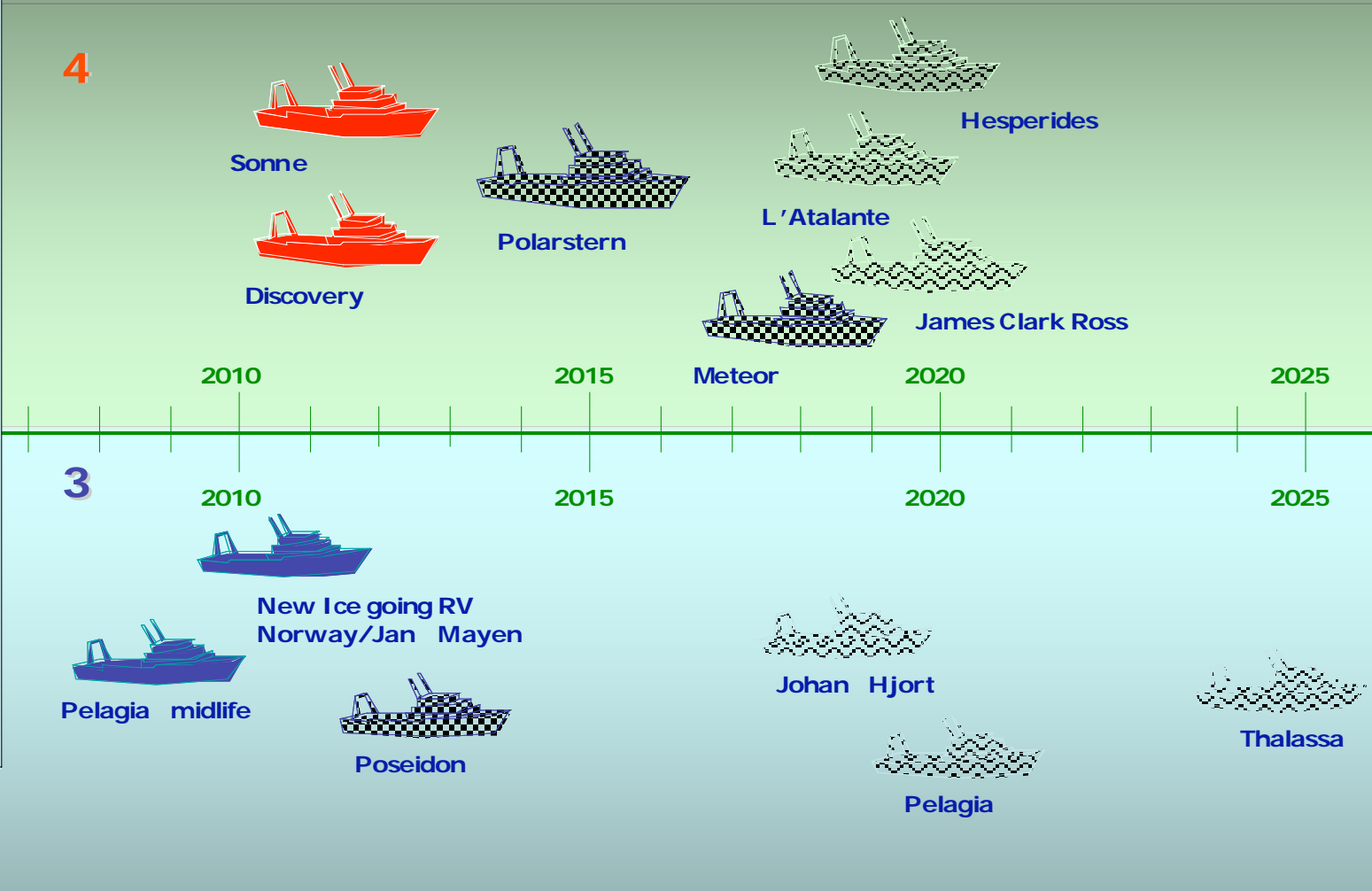
Global Class

Ocean Class

 scheduled

 recommended

 age 30 years



7 Scheduled and recommended renewal/replacements of RVs built before 2000

5 RVs built after 2000: Global Class: Pourquoi Pas? 2005; James Cook 2007
 Ocean Class: G.O. Sars 2003; Maria S. Merian 2005; Sarmiento de Gamboa 2007



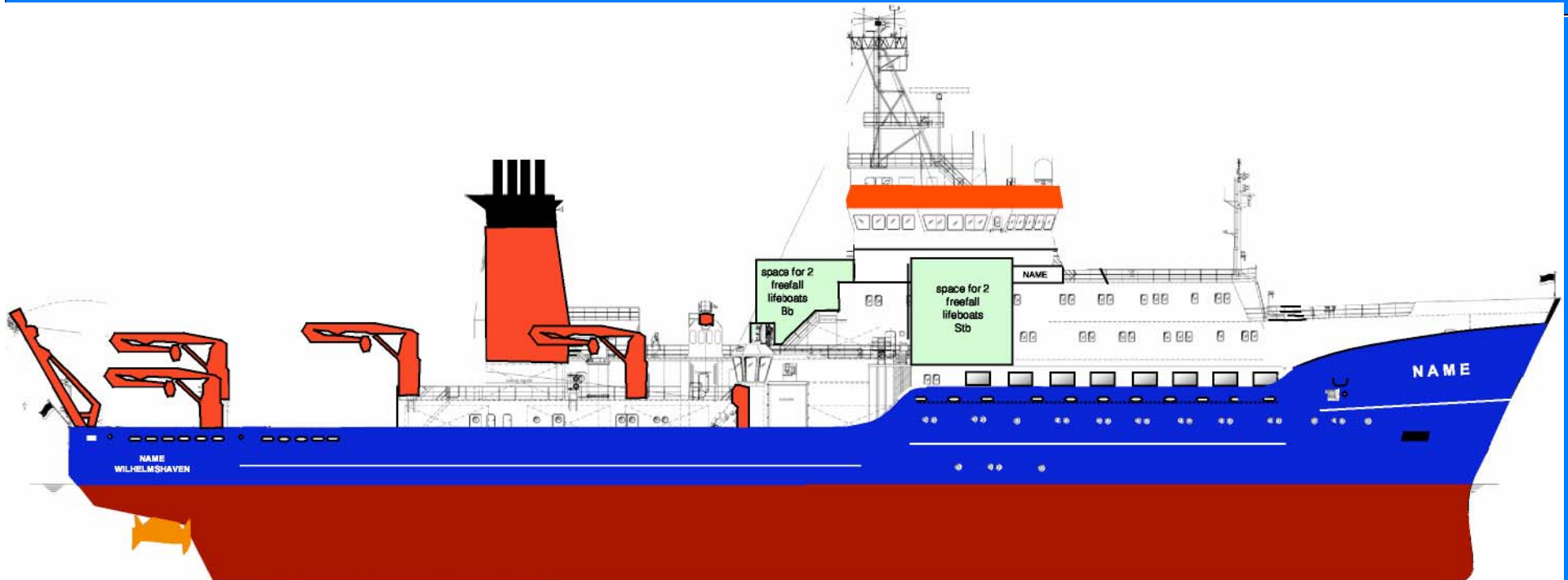
INSTITUTE OF MARINE RESEARCH
HANNOVER



Federal Ministry
of Education
and Research



RV Sonne replacement (Germany)



105 m Global Class RV for the Indian/Pacific Ocean
Multipurpose with a bias on seismic work (no 3D)

To be built in 2010: operational: mid 2013



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HAVFORSKNINGSINSTITUTTET



Federal Ministry
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New Polar I Class RV (Norway)

Creative design

The NVC 395 Polar ship will be designed for operations in waters covered by ice up to one metre thick and is classified to Polar 10 ice class. The contract is with the Norwegian Institute of Marine Research (IMR), but all Norwegian research institutes involved in polar research will be involved in both development and use of the vessel.

Rolls-Royce has been selected to design the vessel. The ship will do environmental research at both the North and South Poles.

The Norwegian government allocated NOK 5 million (750,000 USD) for project development. Estimated costs NOK 500 million (75 million USD).

Proposed LOA 100 m, width 19 m, planned delivery: 2012

The vessel will be outfitted to cover a wide range of marine research operations, such as monitoring fishing stocks, meteorological studies, sea floor sampling and mapping.



INSTITUTE OF MARINE RESEARCH
ИЛАН ПОР СКАИМГОРМСТУТУТ

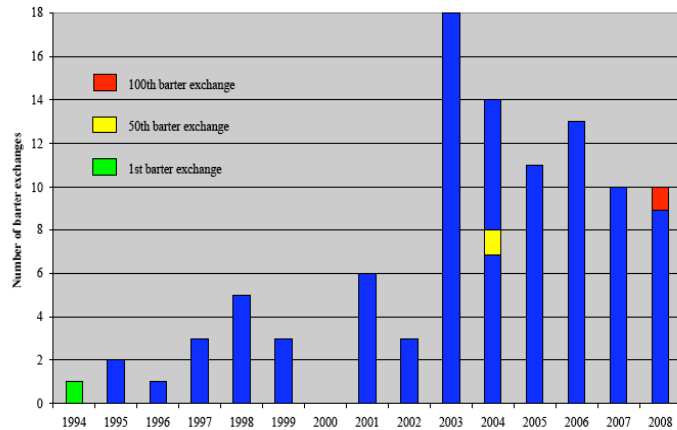


Federal Ministry
of Education
and Research



Number of exchanges

Graph 1 – Annual number of barter exchanges by OFEG partners since 1994



1994-2003: 1st 500 days

2003-2006: 500 – 1000 days

2006-2008: 1000 – 1500 days

From mid 2008: > 1500 days

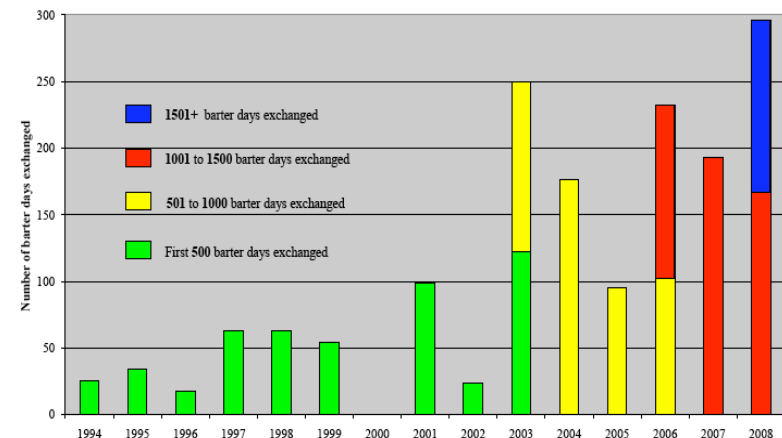
1994 – 1st barter exchange

2004 – 50th barter exchange

2008 – 100th barter exchange

Status per 2008

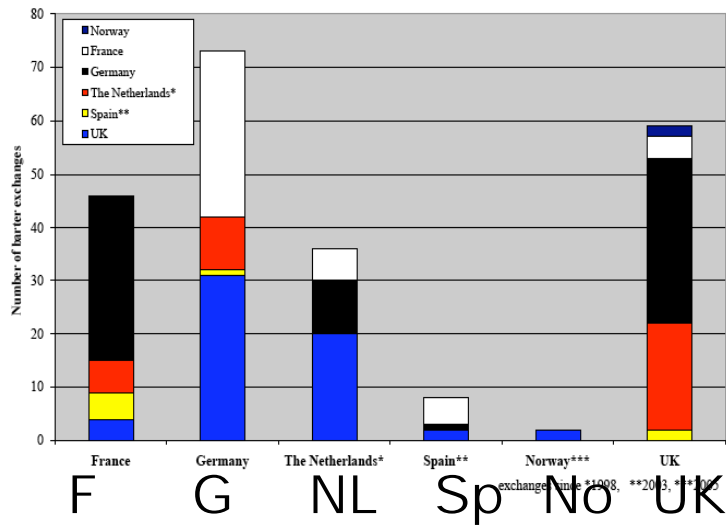
Graph 2 – Annual number of barter days exchanged by OFEG partners since 1994



Number of barter days

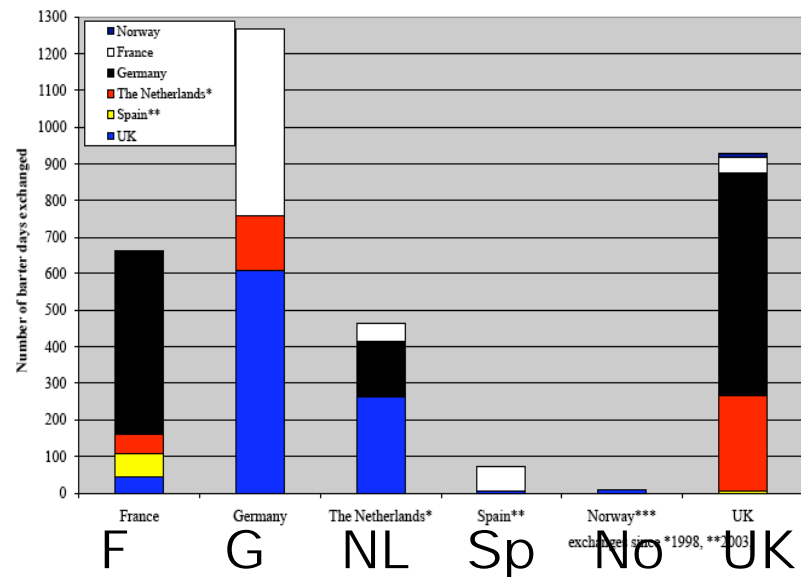
Number of exchanges

Graph 3 – Number of barter exchanges between OFEG partners (1994 to 2008)



Number of exchanged days

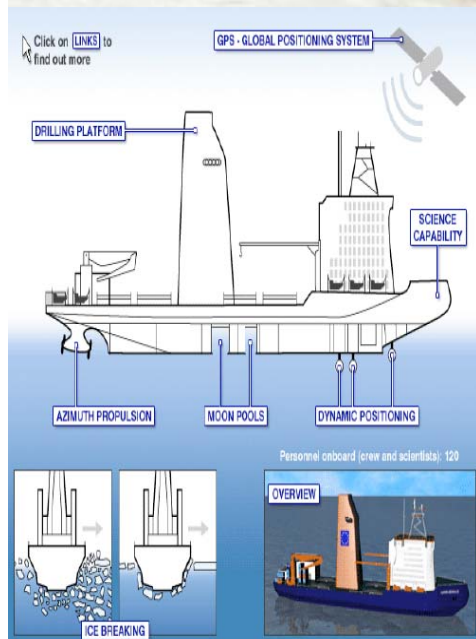
Graph 4 – Barter days exchanged between OFEG partners (1994 to 2008)



Status: 1994 - 2008

European project AURORA BOREALIS

www.eri-aurora-borealis.eu



**Proposed Multi-National Ice Breaker/
Deep Sea Drilling Vessel - LOA 200 m**



LOCAS

R/V Shiyan-1



- Owned by Chinese Academy of Sciences
- the first large-scale Small Waterplane Area Twin Hull (SWATH) in China
- launched in 12 Sep, 2008 at Huludao shipyard
- will be delivered to CAS by the end of 2008 after trial trips



R/V Hai Yang 6 Hao



R/V Hai Yang 6 Hao – LOA 60 m, width 26 m, 4500 t

- Gas Hydrate/Geophysical Research Vessel
- Capacity: 45 scientists, 27 crew, 15000nm range



Thank you



Any questions??