EUROFLEETS legacy
Interest for ERVO

(Valérie Mazauric, EUROFLEETS2 Coordinator)

Eurofleets

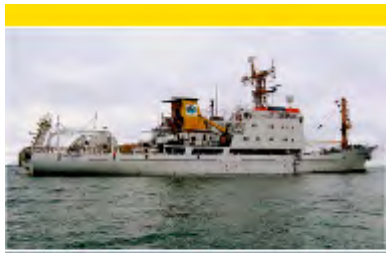
19th ERVO meeting, June 12-14, 2017

EUROFLEETS2 (2013-2017): context and objectives

- The enhancement of the FP7 EU project EUROFLEETS (2009-2013)
- A consortium of 31 partners from 20 countries
- A project structured in 3 activities: Trans National Access (TNA), Networking (NA) and Joint Research (JRA), to:
  - ✓ Offer access to a group of Research Vessels and mobile equipment on basis of scientific excellence
  - ✓ Foster interoperability between European research fleets
  - ✓ Collaborate on technological developments
  - ✓ Train the next generation of marine researchers
  - ✓ Develop strategic perspectives and schemes for better coordinated European Research fleets, including the **polar component**
- An expected follow-up with the EUROFLEETS+ proposal to be submitted to the H2020 INFRAIA 2018-2019 call

A significant group of ship operators providing access to 22 Research Vessels and equipment

8 Global/Ocean RVS


OGS-Explora


Marion Dufresne


L'Atalante


Hespérides


Celtic Explorer


Polarstern


G.O Sars


Sarmiento de Gamboa

14 Regional RVs covering a wide sector

West Coast of Greenland

Norwegian Sea

North-East Atlantic

North Sea

Baltic Sea

Bay of Biscay

Western Mediterranean Sea

- GINR: *Sanna*
- Havstovan: *Magnus Heinason*
- VLIZ: *Simon Stevin*
- TUT: Salme
- RBINS: *Belgica*
- MI: *Celtic Voyager*
- IEO: *Angeles Alvarino* & *Ramon Margalef*
- CNR: *Minerva Uno*
- IOF : *Bios-DVA*
- HCMR: *Aegaeo* and the Max Rover ROV
- Tubitak: *Tubitak Marmara*
- IO-BAS: *Akademic*
- GeoEcoMar: *Mare Nigrum*

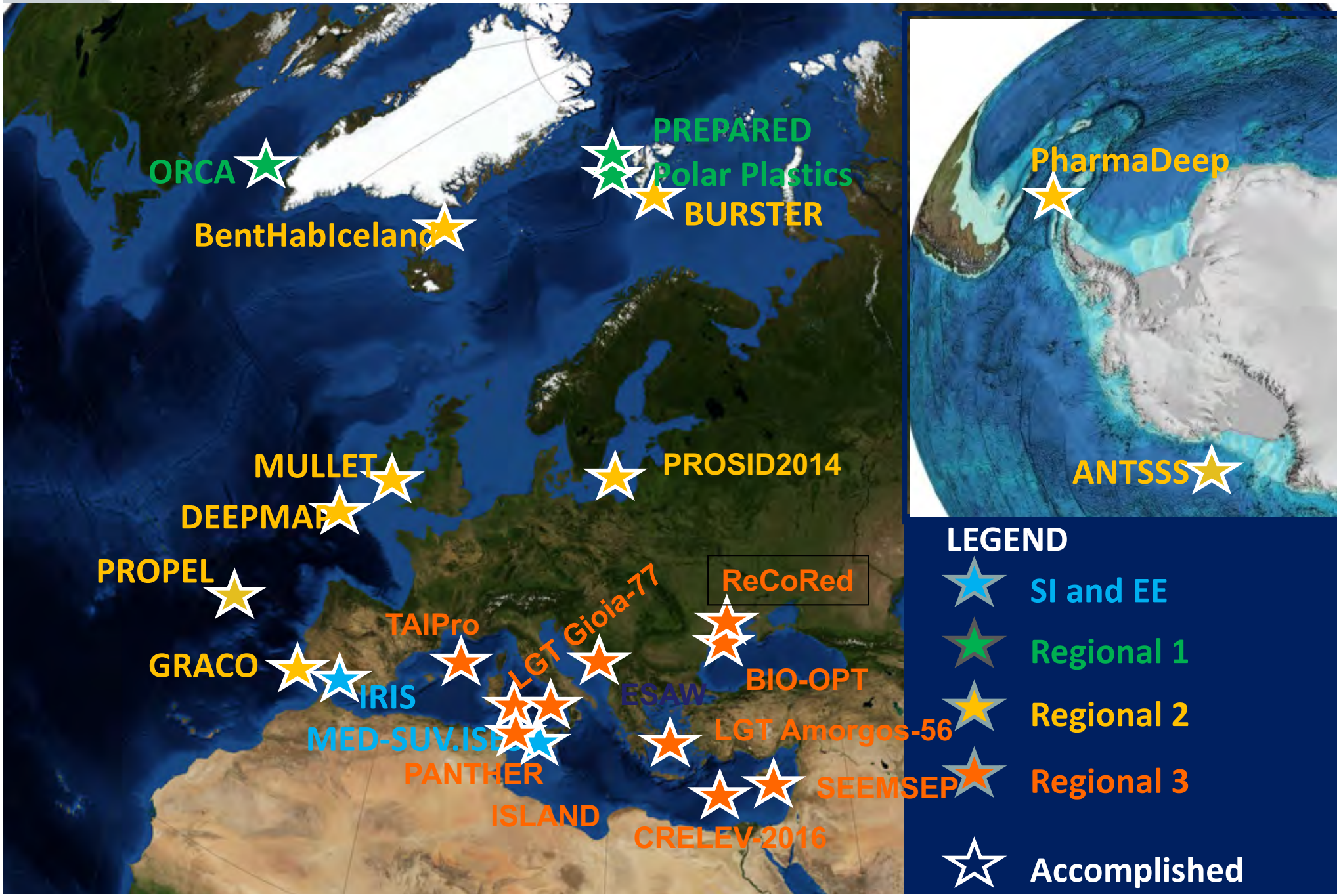
Mediterranean Sea

Mediterranean Sea and Black Sea

The TNA activity, in summary

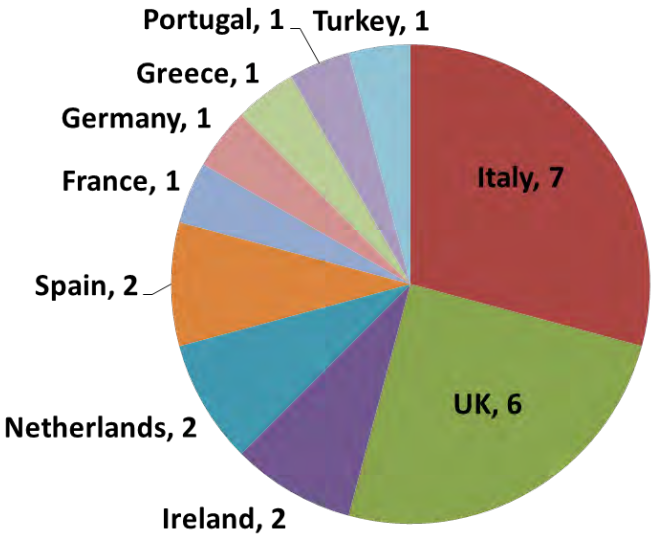
- **4 ship-time calls** and **1 equipment-time call**
- **50 submitted proposals with multi-national groups from more than 180 institutions, from 39 countries**
- In total, **24 scientific projects** on board 17 RVs, representing more than 200 days of ship-time and 25 days of equipment-time
- **6 main geographic areas**: Sub-artic (5), Antarctic (2), Baltic Sea (1), Atlantic (4), Med. Sea (10) and Black sea (2)
- Access requested to carry out projects in a **wide range of scientific disciplines**

EUROFLEETS2 Funded Cruises

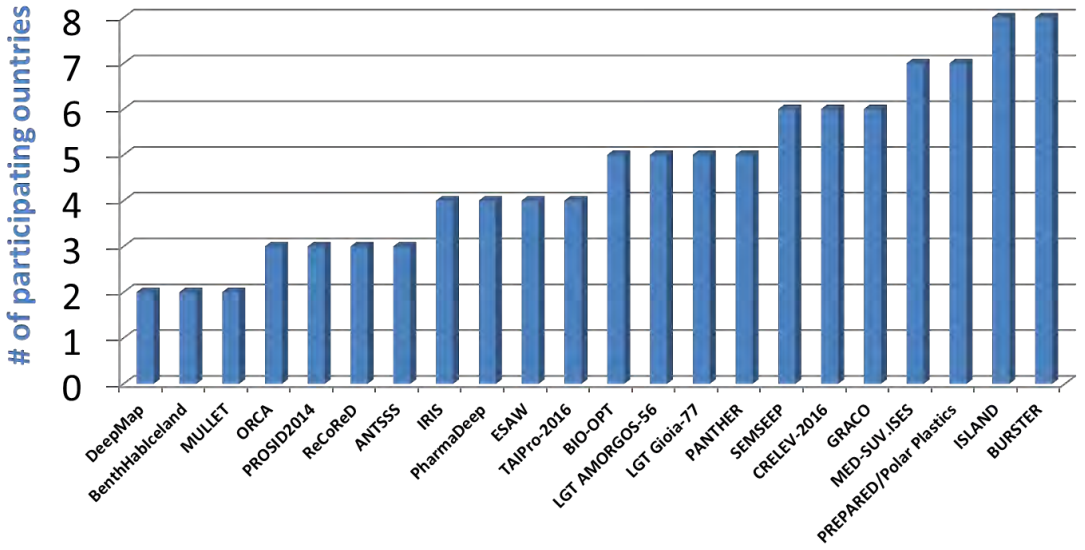


Granted cruises

PIs‘ nationalities

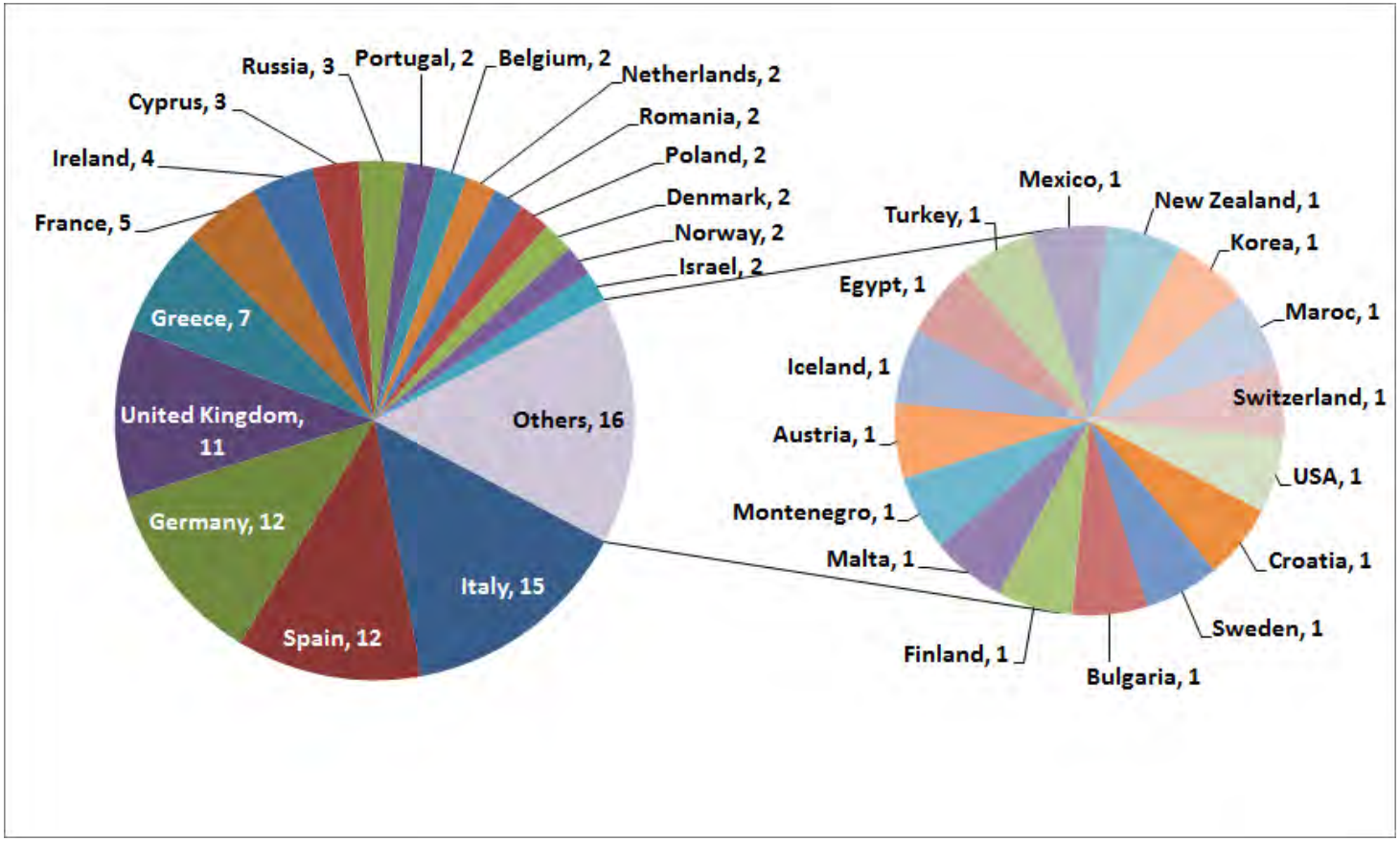


Partnerships of 2-8 countries per proposal



TNA: a highly collaborative activity

Number of countries' participation to granted cruises



On-going preparation of the EUROFLEETS legacy

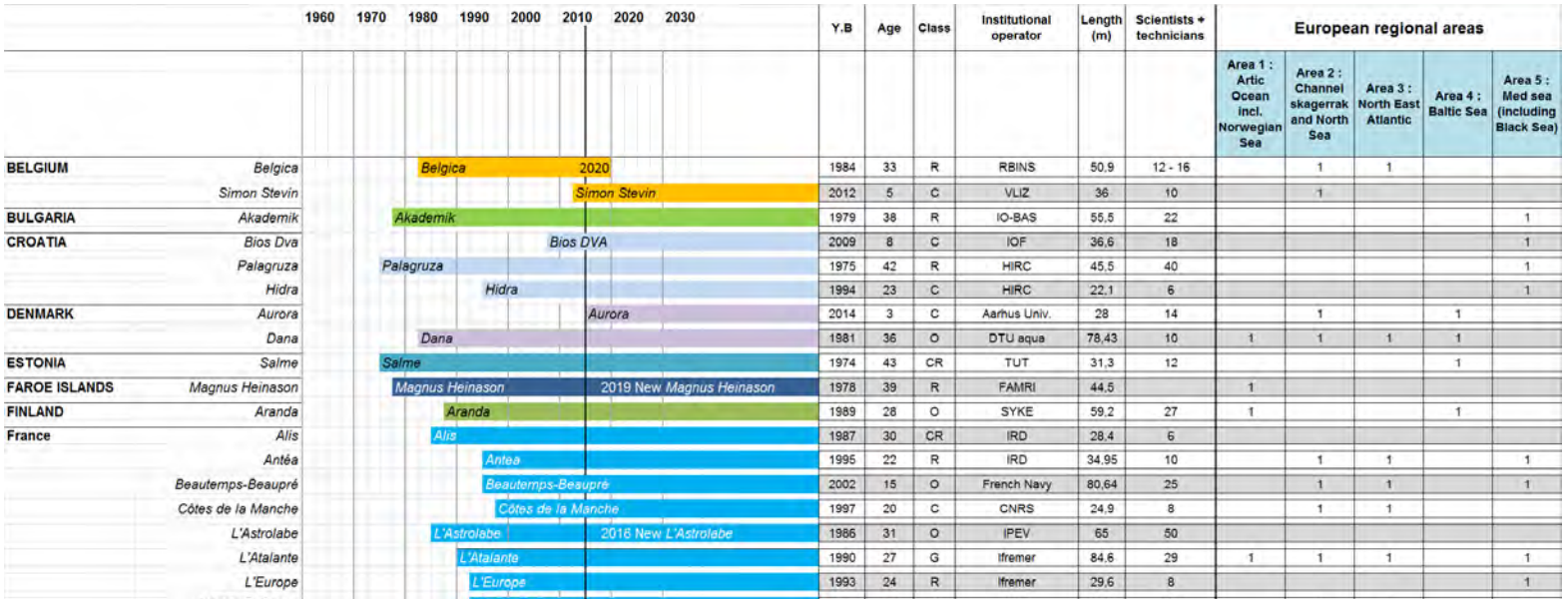
- Legacy report under drafting with EUROFLEETS results and outcomes described in themes and sub-themes. For each sub-theme, a summary of main outcomes and the list of linked Deliverables
- Many of the reports are restricted to the project's Consortium
- Need to identify which thematics/reports ERVO is willing to use, maintain and further expand?
- **Proposed approach**: EUROFLEETS legacy report ready to be transmitted to ERVO ExComm in August so that ERVO can determine what are the reports of interest.

EUROFLEETS legacy: 7 main themes

- Actions towards an improved knowledge and enhanced collaboration of European Research fleets

  - **Follow-up of the status of European Research fleets** (with operating areas, main activities, technical capacities …)

    - The 2016/2016 survey mapping Global, Ocean, Regional RVs and Coastal RVs, operated in 5 main European maritime areas (“Artic Ocean”, “Channel, Skagerrak and North Sea”, “North West Atlantic”, “Baltic sea”, and “Med. Sea, including Black sea”) and in other oceans.



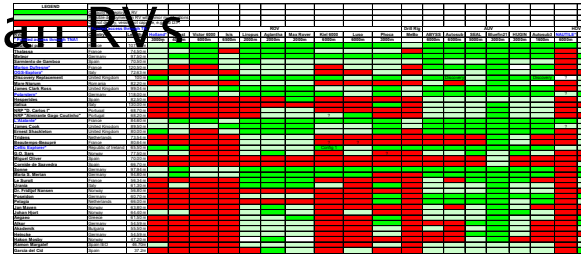
		Y.B	Age	Class	Institutional operator	Length (m)	Scientists + technicians	European regional areas				
								Area 1 : Artic Ocean incl. Norwegian Sea	Area 2 : Channel skagerrak and North Sea	Area 3 : North East Atlantic	Area 4 : Baltic Sea	Area 5 : Med sea (including Black Sea)
BELGIUM	Belgica	1984	33	R	RBINS	50,9	12 - 16		1	1		
	Simon Stevin	2012	5	C	VLIZ	36	10		1			
BULGARIA	Akademik	1979	38	R	IO-BAS	55,5	22					1
CROATIA	Bios Dva	2009	8	C	IOF	36,6	18					1
	Palagruza	1975	42	R	HIRC	45,5	40					1
	Hidra	1994	23	C	HIRC	22,1	6					1
DENMARK	Aurora	2014	3	C	Aarhus Univ.	28	14		1		1	
	Dana	1981	36	O	DTU aqua	78,43	10	1	1	1	1	
ESTONIA	Salme	1974	43	CR	TUT	31,3	12				1	
FAROE ISLANDS	Magnus Heinason	1978	39	R	FAMRI	44,5		1				
FINLAND	Aranda	1989	28	O	SYKE	59,2	27	1			1	
France	Alis	1987	30	CR	IRD	28,4	6					
	Antéa	1995	22	R	IRD	34,95	10		1	1		1
	Beautemps-Beaupré	2002	15	O	French Navy	80,64	25		1	1		1
	Côtes de la Manche	1997	20	C	CNRS	24,9	8		1	1		
	L'Astrolabe	1986	31	O	IPEV	65	50					
	L'Atalante	1990	27	G	Ifremer	84,6	29	1	1	1		1
	L'Europe	1993	24	R	Ifremer	29,6	8					1

EUROFLEETS legacy: 7 main themes

- Actions towards an improved knowledge and enhanced collaboration of European Research fleets

  - **Flagship initiative on Polar Research Fleets** (available capacities, scientific demand, recommendations for a strategic vision)

  - **Contribution to enhanced interoperability** within European Research Fleets
    - with procedures & protocols for deploying (23) LEXIs,
    - with nearly 900 individual interoperability assessments for LEXIs across (39) European Global&Ocean RVs



  - **Definition of common interface specification** to facilitate inte operability with new platforms and between sensors and payloa

EUROFLEETS legacy: 7 main themes

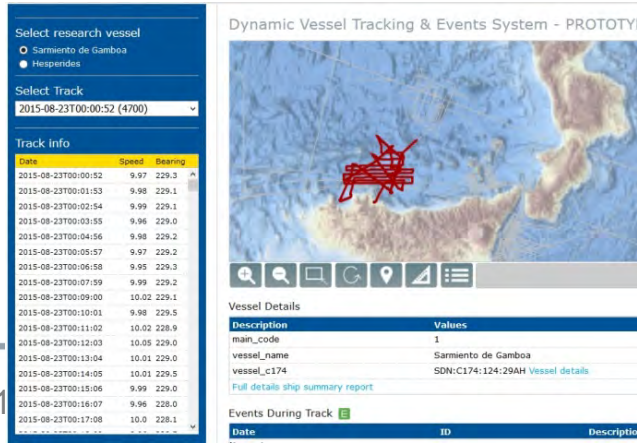
- Actions towards an improved knowledge and enhanced collaboration of European Research fleets

➢ **Management procedures of European RVs**, with guidelines for harmonization

➢ **Schemes for further cooperation and coordination** between European Research fleets

➢ **The EVIOR platform** (http://eurofleet.maris2.nl/startpage.html)

- Access to the RV and LEXI infobases
- Access to the Cruise Programme DB (POGO)
- RV tracking and event logging modules



EUROFLEETS legacy: 7 main themes

- Training & Education activities
- Access to RVs & equipment
  - The **EUROFLEETS Evaluation System** and recommendations for future calls
  - TNA: call definition and proposal selection
- Joint technological research on Research Vessel design
  - A set of **guidelines and recommendations** (“Ship greening”, “Noise and vibration reduction”, “Bubble sweep down avoidance”, “Work deck installations”, “Innovative technologies for optimization of existing ships)
  - **2 generic designs**: the RRV50 and the BRV35

EUROFLEETS legacy: 7 main themes

- Joint technological research on Underwater System technologies
  - Payloads (3D high resolution cameras, BioGeoChemical, In situ Chemical Analysis and Sampling Payload etc…)
  - 3D reconstruction methodologies and algorithms
  - Control of vehicle positioning
  - Embarked energy (development of battery prototypes)
- Joint technological research on software and tools
  - **A range of software tools**: i) onboard tools: EARS, Data acquisition system, Web Services, ii) for Underwater Systems: the Common Mission Programming Tool, iiii) for data post-processing: GLOBE, …
- Link with industry of EUROFLEETS2 Joint Research Activity (JRA) topics

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Photos courtesy of Amy Lusher (MRFC, IE)

Eurofleets

Thank you for your attention

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